

TENTATIVE AGENDA
STATE WATER CONTROL BOARD MEETING
THURSDAY, APRIL 5, 2012
AND FRIDAY, APRIL 6, 2012 (IF NECESSARY)

House Room C
General Assembly Building
9th and Broad Streets
Richmond, VA 23219

CONVENE - 9:30 A.M. Both Days

- I. Minutes** (December 14, 2011)
- II. Permit**
Lake Anna Environmental Services VPDES Permit (Louisa Co.) Thomas
Memorandum **(See Pages 19-55)**
- III. Final Regulations**
Correction of Address in Regulations (9VAC25 - Chapters 20, 101, Miller
260, 590 and 650)
General VPDES Permit Regulation for Vehicle Wash Facilities and Daub
Laundry Facilities (9VAC25-193) and Repeal of General
VPDES Permit Regulation for Coin-Operated
Laundries (9VAC25-810)
- IV. Proposed Regulations**
General VPDES Permit Regulation For Discharges From Tuxford
Petroleum Contaminated Sites, Groundwater Remediation
And Hydrostatic Tests (9VAC25-120)
General VPDES Permit For Non-Contact Cooling Water Tuxford
Discharges of 50,000 Gallons Per Day or Less, 9VAC25-196
- V. Consent Special Orders (VPDES Permit Program/Unpermitted Discharges)** O'Connell
Blue Ridge Regional Office
Town of Appomattox (Appomattox Co.)
Northern Regional Office
Kenneth & Lora Dotson, Locust Grove Town Center (Orange Co.)
Fairfax County Noman M. Cole, Jr. PCP (Fairfax Co.)
Piedmont Regional Office
Honeywell Resins & Chemicals, LLC (Hopewell)
Advanced Flooring Technologies of Virginia, Inc. (Goochland Co.)
Ivy Walk Apartments (Chesterfield Co.)
Southwest Regional Office
The Lee Co. PSA Hickory Falls WWTP (Lee Co.)
Tidewater Regional Office
Carrollton Used Auto Parts, Inc. (Isle of Wight Co.)
Valley Regional Office
Kerr's Creek, LLC (Rockbridge Co.)

- VI. Consent Special Orders (VWP Permit Program/
Wetlands/Ground Water Permit Program)** O'Connell
Northern Regional Office
E&A Call, Inc. Manchester Subdivision (Louisa Co.)
Piedmont Regional Office
HH Hunt Homes, LC (Henrico Co.)
Wilton Development Corp. (Henrico Co.)
- VII. Consent Special Orders (VPA)** O'Connell
Piedmont & Northern Regional Office
Synagro Central, LLC (Essex, Goochland & Fauquier Co.)
Valley Regional Office
Allen L. Shank (Rockingham Co.)
Windcrest Holsteins, Inc. (Rockingham Co.)
- VIII. Consent Special Orders (Oil & Others)** O'Connell
Piedmont Regional Office
Dinwiddie Co. School Board
Valley Regional Office
High Up Dairy Mart, Inc. (Frederick & Shenandoah Counties)
- IX. Public Forum**
- X. Other Business**
Future Meetings (June 25-26, September 27-28 & December 6-7)

[NOT BEFORE 1:30 PM ON THURSDAY, APRIL 5, AND AFTER COMPLETION OF THE ABOVE ITEMS]

- XI. Permits**
VEPCO North Anna Part III VWP Permit (Louisa Co.) Marsala
(See Pages 56-75)

ADJOURN

NOTE: The Board reserves the right to revise this agenda without notice unless prohibited by law. Revisions to the agenda include, but are not limited to, scheduling changes, additions or deletions. Questions arising as to the latest status of the agenda should be directed to the staff contact listed below.

PUBLIC COMMENTS AT STATE WATER CONTROL BOARD MEETINGS: The Board encourages public participation in the performance of its duties and responsibilities. To this end, the Board has adopted public participation procedures for regulatory action and for case decisions. These procedures establish the times for the public to provide appropriate comment to the Board for its consideration.

For **REGULATORY ACTIONS** (adoption, amendment or repeal of regulations), public participation is governed by the Administrative Process Act and the Board's Public Participation Guidelines. Public comment is accepted during the Notice of Intended Regulatory Action phase (minimum 30-day comment period) and during the Notice of Public Comment Period on Proposed Regulatory Action (minimum 60-day comment period). Notice of these comment periods is announced in the Virginia Register, by posting to the Department of Environmental Quality and Virginia Regulatory Town Hall web sites and by mail to those on the Regulatory Development Mailing List. The comments received during the announced public comment periods are summarized for the Board and considered by the Board when making a decision on the regulatory action.

For CASE DECISIONS (issuance and amendment of permits), the Board adopts public participation procedures in the individual regulations which establish the permit programs. As a general rule, public comment is accepted on a draft permit for a period of 30 days. If a public hearing is held, there is an additional comment period, usually 45 days, during which the public hearing is held.

In light of these established procedures, the Board accepts public comment on regulatory actions and case decisions, as well as general comments, at Board meetings in accordance with the following:

REGULATORY ACTIONS: Comments on regulatory actions are allowed only when the staff initially presents a regulatory action to the Board for final adoption. At that time, those persons who commented during the public comment period on the proposal are allowed up to 3 minutes to respond to the summary of the comments presented to the Board. Adoption of an emergency regulation is a final adoption for the purposes of this policy. Persons are allowed up to 3 minutes to address the Board on the emergency regulation under consideration.

CASE DECISIONS: Comments on pending case decisions at Board meetings are accepted only when the staff initially presents the pending case decision to the Board for final action. At that time the Board will allow up to 5 minutes for the applicant/owner to make his complete presentation on the pending decision, unless the applicant/owner objects to specific conditions of the decision. In that case, the applicant/owner will be allowed up to 15 minutes to make his complete presentation. The Board will then allow others who commented during the public comment period (i.e., those who commented at the public hearing or during the public comment period) up to 3 minutes to respond to the summary of the prior public comment period presented to the Board. No public comment is allowed on case decisions when a **FORMAL HEARING** is being held.

POOLING MINUTES: Those persons who commented during the public hearing or public comment period and attend the Board meeting may pool their minutes to allow for a single presentation to the Board that does not exceed the time limitation of 3 minutes times the number of persons pooling minutes, or 15 minutes, whichever is less.

NEW INFORMATION will not be accepted at the meeting. The Board expects comments and information on a regulatory action or pending case decision to be submitted during the established public comment periods. However, the Board recognizes that in rare instances, new information may become available after the close of the public comment period. To provide for consideration of and ensure the appropriate review of this new information, persons who commented during the prior public comment period shall submit the new information to the Department of Environmental Quality (Department) staff contact listed below at least 10 days prior to the Board meeting. The Board's decision will be based on the Department-developed official file and discussions at the Board meeting. In the case of a regulatory action, should the Board or Department decide that the new information was not reasonably available during the prior public comment period, is significant to the Board's decision and should be included in the official file, the Department may announce an additional public comment period in order for all interested persons to have an opportunity to participate.

PUBLIC FORUM: The Board schedules a public forum at each regular meeting to provide an opportunity for citizens to address the Board on matters other than those on the agenda, pending regulatory actions or pending case decisions. Those wishing to address the Board during this time should indicate their desire on the sign-in cards/sheet and limit their presentations to 3 minutes or less.

The Board reserves the right to alter the time limitations set forth in this policy without notice and to ensure comments presented at the meeting conform to this policy.

Department of Environmental Quality Staff Contact: Cindy M. Berndt, Director, Regulatory Affairs, Department of Environmental Quality, 629 East Main Street, P.O. Box 1105, Richmond, Virginia 23218, phone (804) 698-4378; fax (804) 698-4346; e-mail: cindy.berndt@deq.virginia.gov.

Final Exempt Action Amendment to Update DEQ Address in Water Regulations: This regulatory amendment is presented to the Board for consideration as a final regulation. This regulatory amendment will update the mailing address for the Department of Environmental Quality (DEQ). In some of the Board's regulations, the old address is provided. By this action, that address will be updated to the current one. The regulations to be updated are 9VAC25-20, 9VAC25-101, 9VAC25-260, 9VAC25-590 and 9VAC25-650.

General VPDES Permit Regulation for Vehicle Wash Facilities and Laundry Facilities, 9VAC25-194 (formerly the General VPDES Permit for Car Wash Facilities) - Amendments and Reissuance of General Permit (VAG75) and Repeal of General VPDES Permit Regulation for Coin-Operated Laundries, 9VAC25-810 - Repeal of Existing Regulation: The staff is bringing these final regulation amendments before the Board to request adoption of the regulation establishing the General VPDES Permit for Vehicle Wash Facilities and Laundry Facilities. The current VPDES Car Wash General Permit will expire on October 16, 2012, and the regulation establishing this general permit is being amended to reissue another five-year permit. The most significant change is that the scope of the proposal has been widened to include many types of vehicle wash facilities and has combined the coin-operated laundry general permit into this permit. Vehicle wash and coin-operated laundry effluents are of similar quality and quantity and the public and staff requested a wider scope of coverage. The regulation takes into consideration the recommendations of a technical advisory committee formed for this regulatory action. A secondary action associated with this rulemaking is the repeal of the VPDES coin-operated laundry general permit regulation since the requirements of that permit (VAG72) are being incorporated into VAG75.

The Board authorized a public hearing and comment period for this rulemaking on September 22, 2011. One public hearing was held on December 1, 2011 and the public notice comment period was October 24 thru December 27, 2011. One comment letter was received from the City of Alexandria. The city was in support of the permit but had some specific comments which are summarized below:

COMMENT: The city wanted to ensure that mobile car washes must obtain coverage under the general permit. They had some specific language changes to make this clear. Related to this comment, MS4 communities are tasked with eliminating illicit discharges to the separate storm sewer system. A process to ensure that facilities which fit the definition of 'car wash' seek coverage under the general permit should be considered. Some recourse should be incurred for those defined by that do not seek coverage.

RESPONSE: The final proposed regulation now recognizes "*mobile*" vehicle washing in the definition of "*vehicle wash*" and states in 9VAC25-194-50 C that "*Mobile vehicle wash owners shall operate such that there is no discharge to surface waters and storm sewers unless they have coverage under this permit.*" Without permit coverage, discharges to surface waters or the storm sewers are not allowed. DEQ consistently tells mobile car operators to apply technologies or best management practices that prevent wash water from entering the storm drain. There are mobile operators that use technologies or best management practices so they may conduct business without discharging to surface waters or storm drains. Normally, DEQ is only made aware of mobile car wash wastewater discharges via citizen complaints and at that time DEQ informs the owner that unpermitted discharges are illegal and encourages the mobile car wash to take steps to prevent discharges to surface waters. Staff believes that this clarification reflects how the agency currently handles mobile vehicle washing and also should assist the MS4 operators in eliminating illicit discharges from the storm sewer system.

COMMENT: They supported the TMDL and antidegradation language but asked to include monitoring for other pollutants such as oils, corrosives, fuel and other automotive related materials.

RESPONSE: We believe that oil and corrosives are already controlled via the oil and grease and pH limits. Also, acid caustic metal brighteners are not included in the definition of vehicle wash so this is not allowed under the permit. The permit also prohibits adding chemicals to the water or waste which may be discharged other than those listed on the owner's accepted registration statement. We would not accept registration if excluded items (such as washing using acid caustic metal brighteners) were listed. Fuel related materials were not identified by EPA in the waste characterization of this industry when EPA was considering effluent guidelines for the industry (*Guidance Document for Effluent Discharges from the Auto and Other Laundries Point Source Category*, February 1982 and the *DRAFT Development Documents for Proposed Effluent Limitations Guidelines and New Sources Performance Standards for the Auto and Other Laundries Point Source Category*, April 1974). We do not believe adding a new limit, such as Total Petroleum Hydrocarbons (TPH), is appropriate at this time without information indicating it is needed to protect aquatic life and human health.

The U.S. Environmental Protection Agency has reviewed the general permit and had no comments.

SUMMARY OF 9VAC25-194 PROPOSED REVISIONS - August 18, 2011 revised March 1, 2012 to include changes made since proposed (noted as 'Since NOPC' below)

Section 10 – Definitions. Added a definition for department, laundry, total maximum daily load, vehicle maintenance and vehicle wash because this terminology is used in the regulation. **Since NOPC** we also added "or DEQ" in the definition of "Department" since the acronym is used in the permit. Also **since NOPC**, in the definition of "Vehicle Wash" we included "mobile" as part of the definition. This was based on comments from the City of Alexandria that the definition of "Vehicle Wash" seems to exclude mobile car washes because the definition uses the word "fixed" facility yet mobile car washes can apply for coverage (section 50 C below).

Section 20 – Purpose. Added the statement the general permit regulation covers vehicle wash facilities and laundry facilities. Previously the permit covered only car wash facilities. The staff and the public requested wider coverage for similar washing facilities as defined in section 10.

Section 40 – Effective dates changed for reissuance throughout regulation.

Section 50 A and B – Authorization – Reformatted to match structure of other general permits being issued at this time. Added three additional reasons authorization to discharge cannot be granted per EPA comments on other general permits issued recently and per technical advisory committee recommendations. Therefore, an owner will be denied authorization when the discharge would violate the antidegradation policy, if additional requirements are needed to meet a TMDL or if central wastewater treatment facilities are reasonably available. **Since NOPC**, the TMDL reason an owner will be denied coverage was revised to match language agreed upon by TMDL and VPDES Permits staff to say "The discharge is not consistent with the assumptions and requirements of an approved TMDL." This language is being inserted into all general permits as they are reissued. The language was developed since general permit discharges are considered insignificant to the overall TMDL waste load allocation. This clarification allows staff more flexibility to allow permit coverage for discharges without requiring immediate modification of the TMDL. DEQ will track all the general permit discharges and once they become significant for purposes of a TMDL, the TMDL will be modified to include the load.

Section 50 C – In the proposed, a statement was added that "Mobile car washes may apply for coverage under this permit provided each discharge location is permitted separately." **Since NOPC**, that statement was changed to "Mobile vehicle wash owners shall operate such that there is no discharge to surface waters and storm sewers unless they have coverage under this permit." This was added in response to the City of Alexandria concerns with mobile car wash discharges going to the storm sewer but also reflects what DEQ routinely tells mobile car wash businesses when they call asking about permit requirements. Staff rewrote the statement to put the primary and preferred mode of operation (no discharge) into the statement.

Section 50 D– Added the statement "Compliance with this general permit constitutes compliance with the Clean Water Act, the State Water Control Law, and applicable regulations under either, with the exceptions stated in 9VAC25-31-60 of the VPDES Permit Regulation." This was added in response to AGO comments on other general permits recently to recognize there are some exceptions to compliance with the CWA as stated in the permit regulation.

Section 50 E – Added language to allow for administrative continuances of coverage under the old expired general permit until the new permit is issued and coverage is granted or coverage is denied; if the permittee has submitted a timely registration and is in compliance. This language is being added to all recently reissued general permits so permittees can discharge legally and safely if the permit reissuance process is delayed. **Since NOPC**, we clarified in E 2 b that if we deny coverage under the general permit the owner is to cease "discharges" rather than cease "activities." We didn't intend to mean that the entire operation must shut down in the instances when the board can no longer allow coverage for the discharge. Other options do exist to keep a facility operating if a permit is not allowed (pump and haul, recycle/reuse or discharge to sanitary).

Section 60 A – Registration – Reformatted to match structure of other recent general permits. Revised deadline for existing facilities currently holding an individual VPDES permit to say they must notify us 210 days prior to give individual permit holders the required 180 days to submit an individual permit application if their request for coverage under the general permit is denied. Revised existing facilities covered under to submit registration prior to September 16, 2012 (which is 30 days prior to expiration). **Since NOPC**, we corrected a spelling error in this paragraph ("launder" to "laundry").

Section 60 B – Added statement "Late registration statements will be accepted, but authorization to discharge will not be retroactive." for clarification because we still want owners to get coverage under the General Permit even

though they are received late. **Since NOPC**, we added a clarification statement that existing owners that submit late registration statements are granted continuation of coverage as long as they submit a registration statement before the expiration date of the permit. We require permittees to submit a registration statement 30 days before expiration but we want to allow continuation as long as they submit before the effective date and they are in good standing with the requirements of the existing permit. This gives DEQ staff as much time as possible to get the permit reissued and keep our permittees covered during that 30 days if we happen to be running behind.

Section 60 C – Added the question *"Does the facility discharge to a Municipal Separate Storm Sewer System (MS4)? If "yes," the facility owner must notify the owner of the municipal separate storm sewer system of the existence of the discharge within 30 days of coverage under the general permit and provide the following information: the name of the facility, a contact person and phone number, the location of the discharge, the nature of the discharge and the facility's VPDES general permit number."* This notification is a permit requirement and the TAC thought it should be repeated as a reminder in the registration process.

Added the question *"Does your locality require connection to central wastewater treatment facilities?"* and *"Are central wastewater treatment facilities available to serve the site? If "yes," the option of discharging to the central wastewater facility must be evaluated and the result of that evaluation reported here."* This is a requirement carried over from the coin-operated laundry permit.

Added the question *"Will detergent used for washing vehicles contain more than 0.5 percent phosphorus by weight?"* to gather information about the use of phosphate detergents in the vehicle wash industry.

Added email address, allowance for computer maps to registration statement and a few other minor clarifications.

Section 70 Part I A 1 and 2 – General Permit - Reformatted footnotes and clarified that TSS limit is two significant digits to match current agency guidance for use of significant digits. **Since NOPC**, we changed in footnote 3 in Part I A 1 the submittal dates for annual DMRs. The existing submittal dates didn't conform to any guidance and staff thought it less confusing to tie the DMR submittal dates for annual monitoring to a calendar year. Other General Permits are set up this way and the other 3 limits pages are also set up that way.

Section 70 Part I A 3 – Added a limits page for laundry facilities since the coin operated laundry permit conditions are proposed for inclusion in this permit. Additional parameters for bacteria (enterococci and fecal coliform in addition to the E. coli limit) were added to ensure that laundry facilities to salt water could be included.

Section 70 Part I A 4 – Added a new limits page for combined laundry and car wash facilities.

Section 70 Part I B 2 – Special Conditions – Added the statement *"There shall be no discharge of floating solids or visible foam in other than trace amounts."* This was moved from the permits limits page. This is a standard special condition in most general permits.

Section 70 Part I B 8 – Added *"If the facility has a vehicle wash discharge with a monthly average flow rate of less than 5,000 gallons per day, and the flow rate increases above a monthly average flow rate of 5,000 gallons per day, an amended registration statement shall be filed within 30 days of the increased flow."* This deadline is part of the registration statement requirements in the regulation but the technical advisory committee felt it should be repeated in the permit to remind the permittee of the deadline.

Section 70 Part I B 10 – Added *"Approval for coverage under this general permit does not relieve any owner of the responsibility to comply with any other federal, state or local*

statute, ordinance or regulation." This requirement is part of the regulation but the technical advisory committee felt it should be repeated in the permit to remind the permittee of the responsibility.

Section 70 Part I B 12 – Added an operations and maintenance requirement because the current coin-operated laundry permit contained this requirement and since the coin-operated laundry permit is being combined with the car wash permit, the operations and maintenance manual should be included for both types of facilities.

Section 70 Part I B 13 – Compliance Reporting Special Condition to match similar language going into other recent general permits and individual permits. The condition defines quantification levels, how to treat results < QL and rounding rules. This helps to ensure more consistent compliance reporting.

Section 70 Part I B 14 – Added *"Samples taken as required by this permit shall be analyzed in accordance with IVAC30-45: Certification for Noncommercial Environmental Laboratories, or IVAC30-46: Accreditation for Commercial Environmental Laboratories."* This is a new regulatory requirement effective January 1, 2012.

Section 70 Part I B 15 – Added *"The discharges authorized by this permit shall be controlled as necessary to meet applicable water quality standards."* This is a general requirement to meet water quality standards and matches similar language going into other recent general permits.

Section 70 Part I B 16 - **Since NOPC**, added a new special condition "*Discharges to waters with an approved "total maximum daily load" (TMDL). Owners of facilities that are a source of the specified pollutant of concern to waters where an approved TMDL has been established shall implement measures and controls that are consistent with the assumptions and requirements of the TMDL.*" This special condition is being inserted into all general permits as they are reissued. The condition was developed since general permit discharges are considered insignificant to the overall TMDL waste load allocation. This special condition allows staff more flexibility to allow permit coverage for discharges without requiring immediate modification of the TMDL. DEQ will track all the general permit discharges and once they become significant for purposes of a TMDL, the TMDL will be modified to include the load.

Section 70 Part I B 17 - Added procedures for termination notices so permittees are aware of their responsibilities when they need to terminate a permit. **Since NOPC**, added a fourth 'catch all' reason that an owner may request termination "*Notice of termination is requested for another reason provided the board agrees that coverage under this general permit is no longer needed.*" There may be other reasons an owner requests termination (e.g., connects to sanitary, goes to complete recycle and reuse) besides the 3 that were listed (operations have ceased, new owner, covered by an individual permit).

Section 70 Part II I - **Since NOPC**, under the 'Note' which explains 24 hour reporting, added the online website as another option for 24 hour reporting.

Section 70 Part II M - Duty to reapply - Revised to say submittal of a new registration statement is 30 days before expiration instead of 180 days prior to expiration. This matches the new submittal date requirement in the regulation at 9VAC25-194-60 A 2 c.

Section 70 Part II Y – Transfer of permits – Revised to say automatic transfers can occur within 30 days of transfer rather than 30 days in advance of transfer. We have been told by staff that notification of an ownership transfer cannot occur in advance. Our regional office staff has also stated this advance transfer notification is unnecessary and we should be able to accept a transfer notification at any time.

9VAC25-810 All Sections - Deleted as this is the existing (VAG72) coin-operated laundry general permit regulation and these requirements have been incorporated into the vehicle wash and laundry wash general permit 9VAC25-194 (VAG75). Note that this document is not attached but all existing requirements will be stricken and will expire upon the effective date of the vehicle wash and laundry wash general permit.

General VPDES Permit Regulation for Discharges from Petroleum Contaminated Sites, Groundwater Remediation and Hydrostatic Tests, 9VAC25-120 - Amendments to the Regulation and Reissuance of the General Permit (VAG83): The purpose of this agenda item is to request that the Board authorize the staff to issue a public notice and hold a public hearing on a draft regulation that will reissue the VPDES general permit for discharges from petroleum contaminated sites, groundwater remediation and hydrostatic tests, VAG83. The existing general permit will expire on February 25, 2013. A Notice of Intended Regulatory Action (NOIRA) for the amendment was published in the Virginia Register on April 11, 2011 and the comment period ended on May 11, 2011. There were no comments received during the NOIRA comment period. The revised regulation takes into consideration the recommendations of a technical advisory committee (TAC) formed for this regulatory action.

Summary of Significant Proposed Changes From the 2008 General Permit

This general permit replaces the 2008 Petroleum Contaminated Sites, Groundwater Remediation and Hydrostatic Tests General Permit (VAG83) which was issued for a five-year term on February 26, 2008. The proposed changes to the regulation were made to make this general permit similar to other general permits issued recently and in response to Technical Advisory Committee (TAC) suggestions and staff requests to clarify and update permit limits and conditions. Following is a list of the significant proposed changes from the 2008 regulation:

Section 50 - Purpose. Added coverage under the permit for hydrostatic tests of water storage tanks and pipelines. These tests are similar in discharge characteristics to the permit's existing hydrostatic tests, and were requested to be added to the permit coverage.

Section 60 - Authorization to Discharge, Subsection B. Added two reasons why a facility's discharge would not be eligible for coverage under the permit: (1) If the discharge violates or would violate the antidegradation policy in the Water Quality Standards at 9VAC25-260-30, and (2) If the discharge is not consistent with the assumptions and requirements of an approved TMDL. These restrictions on coverage are being added to all general permits as they are reissued.

Section 60 - Authorization to Discharge, Subsection D. Added language to allow for administrative continuance of coverage under the expiring general permit until the new permit is issued by the Board, and coverage is either granted or denied. The permittee must submit a timely and complete registration statement prior to the expiration date of the existing permit, and be in compliance with the terms of the expiring permit in order to qualify for continuance. This language is being added to all general permits as they are reissued so permittees can discharge legally and safely if the permit reissuance process is delayed.

Section 70 - Registration Statement, Subsection A. Added a provision that allows specified short term projects (14 days or less in duration) and hydrostatic test discharges to be automatically covered under the permit without the requirement to submit a registration statement. Short term projects include: emergency repairs; dewatering projects; utility work and repairs in areas of known contamination; tank placement or removal in areas of known contamination; pilot studies or pilot tests, including aquifer tests; and new well construction discharges of groundwater. The owner is authorized to discharge under the permit immediately upon the permit's effective date, and must notify the department within 14 days of the discharge's completion. These discharges are subject to the same effluent limitations in the permit as other similar discharges. The minimal paperwork involved will allow these projects to proceed quickly, and will free up both owner and DEQ staff resources, while still protecting the environment.

Section 80 - General Permit, Part I A. Consolidated the Part I A Effluent Limitations and Monitoring Requirements for "Gasoline Contaminated Discharges" into one limits table, and for all receiving waters, and the discharges "Contaminated by Petroleum Products Other Than Gasoline" into one limits table, and for all receiving waters. Recalculated the effluent limits in the combined tables to be at the most protective levels for the discharge type and to protect all receiving waters based on an analysis of water quality criteria, toxicity data and best professional judgment. A review of existing permittee effluent monitoring data for the existing single limits tables show that permittees are currently meeting the proposed limitations with the treatment technology that is presently utilized.

Section 80 - General Permit, Part I B - Special Conditions. Added permit special conditions for the following:

- (1) Requires the permittee to report monitoring results using the same number of significant digits as listed in the permit. This requirement spells out the number of significant digits that the permittee must use when reporting monitoring results to the Department, and is being added as necessary to all general permits as they are reissued.
- (2) Requires the permittee to control discharges as necessary to meet water quality standards. This requirement was requested to be added by EPA to another recently reissued general permit, and is being added to all general permits as they are reissued.
- (3) Coverage under this general permit does not relieve the permittee with the responsibility to comply with any other federal, state or local statute, ordinance or regulation. This special condition is already in the regulation "Authorization to Discharge" section, but staff felt it should be repeated in the permit itself to remind the permittee of the responsibility.
- (4) Requires the permittee to submit discharge monitoring reports to both the Department and the owner of the municipal storm sewer system (MS4) if they discharge to the MS4. This special condition was added at the request of the TAC to inform the MS4 owner of exactly what is being discharged to their system since MS4 owners are ultimately responsible for the discharges from the MS4.
- (5) Requires the permittee to implement measures and controls consistent with a TMDL requirement when the facility is subject to an approved TMDL. This special condition language was developed by DEQ TMDL and VPDES Permits staff, and is being inserted into all general permits as they are reissued. The condition was developed since general permit discharges are considered insignificant to the overall TMDL waste load allocation. This special condition allows staff more flexibility to allow permit coverage for discharges without requiring immediate modification of the TMDL. DEQ will track the general permit discharges and once they become significant, the TMDL will be modified to include the load.

General VPDES Permit For Non-Contact Cooling Water Discharges of 50,000 Gallons Per Day or Less, 9VAC25-196 - Amendments to the Regulation and Reissuance of the General Permit (VAG25): The purpose of this agenda item is to request that the Board authorize the staff to issue a public notice and hold a public hearing on a draft regulation that will reissue the VPDES general permit for discharges from non-contact cooling water facilities, VAG25. The existing general permit will expire on March 1, 2013. A Notice of Intended Regulatory Action (NOIRA) for the amendment was published in the Virginia Register on March 15, 2011 and the comment period ended on April 20, 2011. There were no comments received during the NOIRA comment period. The revised regulation takes into consideration the recommendations of a technical advisory committee (TAC) formed for this regulatory action.

Summary of Significant Proposed Changes From the 2008 General Permit

This general permit replaces the 2008 Non-contact Cooling Water Facilities General Permit (VAG25) which was issued for a five-year term on March 2, 2008. The proposed changes to the regulation were made to make this general permit similar to other general permits issued recently and in response to Technical Advisory Committee (TAC) suggestions and staff requests to clarify and update permit limits and conditions. Following is a list of the significant proposed changes from the 2008 regulation:

Section 60 - Authorization to Discharge, Subsection B. Added two reasons why a facility's discharge would not be eligible for coverage under the permit: (1) If the discharge violates or would violate the antidegradation policy in the Water Quality Standards at 9VAC25-260-30, and (2) If the discharge is not consistent with the assumptions and requirements of an approved TMDL. These restrictions on coverage are being added to all general permits as they are reissued.

Section 60 - Authorization to Discharge, Subsection G. Added language to allow for administrative continuance of coverage under the expiring general permit until the new permit is issued by the Board, and coverage is either granted or denied. The permittee must submit a timely and complete registration statement prior to the expiration date of the existing permit, and be in compliance with the terms of the expiring permit in order to qualify for continuance. This language is being added to all general permits as they are reissued so permittees can discharge legally and safely if the permit reissuance process is delayed.

Section 80 - General Permit, Part I A.

Effluent Limits Table 1. Set the monitoring period for this limit set to the first four years of the permit. Changed the monitoring for copper, silver and zinc from "Total Dissolved" to "Total Recoverable".

Effluent Limits Tables 2 and 3. Added two limit sets for the last year of the permit, one for discharges to freshwater receiving streams and one for discharges to saltwater receiving streams. These limit sets are basically the same as the Table 1 limits, but include actual effluent limitations for copper, silver and zinc. The previous permit did not limit those metals, but had a "monitoring only" requirement. The technical advisory committee (TAC) for this permit reissuance agreed that limits should be included in this reissuance, but favored a phasing in of the limits until the end of the permit term. This will give facilities time to evaluate their effluent discharge data to determine if there is a problem with these metals, and to make corrections to their system to fix the problem before the limits take effect.

Section 80 - General Permit, Part I B - Special Conditions. Added or modified the permit special conditions as follows:

- (1) Added a requirement that the permittee report monitoring results using the same number of significant digits as listed in the permit. This requirement spells out the number of significant digits that the permittee must use when reporting monitoring results to the Department, and is being added as necessary to all general permits as they are reissued.
- (2) Added a requirement that the permittee implement measures and controls consistent with a TMDL requirement when the facility is subject to an approved TMDL. This special condition language was developed by DEQ TMDL and VPDES Permits staff, and is being inserted into all general permits as they are reissued. The condition was developed since general permit discharges are considered insignificant to the overall TMDL waste load allocation. This special condition allows staff more flexibility to allow permit coverage for discharges without requiring immediate modification of the TMDL. DEQ will track the general permit discharges and once they become significant, the TMDL will be modified to include the load.
- (3) Added a notice of termination special condition that spells out the procedures the permittee must follow to terminate permit coverage.
- (4) Added a requirement that the permittee control discharges as necessary to meet water quality standards. This requirement was requested to be added by EPA to another recently reissued general permit, and is being added to all general permits as they are reissued.
- (5) Added a statement that coverage under this general permit does not relieve the permittee with the responsibility to comply with any other federal, state or local statute, ordinance or regulation. This special condition is already in the regulation "Authorization to Discharge" section, but staff felt it should be repeated in the permit itself to remind the permittee of the responsibility.
- (6) Modified the permit special condition regarding discharges to an MS4. Added that the permittee must submit discharge monitoring reports to both the Department and the owner of the municipal storm sewer system (MS4) if they discharge to the MS4. This special condition was modified at the request of the TAC to inform the MS4 owner of

exactly what is being discharged to their system since MS4 owners are ultimately responsible for the discharges from the MS4.

Town of Appomattox - Water Reclamation Facility, Appomattox Co. - Order by Consent – Amendment with Civil Charges: The Town entered into a Consent Order (“Order”) with the Department of Environmental Quality (“Department”) on October 26, 2009, which required the Town to submit a Plan of Action (POA) describing the corrective measures proposed by the Town to eliminate zinc violations at the Facility and return to compliance with its Permit limitations. The Order contained a final compliance deadline for zinc of October 26, 2011, and included an interim zinc limitation of 223 µg/l to remain in effect for the life of the Order. Since the Order was executed, the Department issued Notices of Violation (“NOVs”) W2010-03-L-0006, W2010-06-L-0003 and W2010-07-L-0003, in addition to Warning Letters (“WLs”) W2010-04-L-1014, W2010-08-L-1012 and W2011-09-L-1003. The Town was cited for ammonia and TSS violations, reporting deficiencies, late submittal of Progress Reports, and late submittal of both a verification of the current O&M Manual and Significant Waste Discharge Survey. The Department held an enforcement meeting at the Department’s Blue Ridge Regional Office in Lynchburg on December 29, 2010 with Town officials to summarize the corrective measures undertaken in an effort to reduce zinc concentrations in the Facility’s effluent. A follow-up meeting was held at the Town Hall in Appomattox on April 27, 2011, during which officials presented the results of zinc effluent sample analysis collected on April 18, 2011, with a result of 38 µg/l. Average zinc concentrations for March 2011 were 58 µg/l, and were 48 µg/l for April 2011. The Town has demonstrated considerable progress towards meeting the zinc Permit limitations for the Facility. Town officials requested an extension on the final compliance deadline of October 26, 2011 contained in the Order to allow for construction of a potable water line to be extended from Concord in Campbell County to the Town. The Town anticipates completion of the construction project by November 2012. The water will be supplied by the Campbell County Utilities Service Administration (CCUSA) and will utilize a surface water supply, which tends to exhibit higher levels of pH, hardness and alkalinity than the groundwater currently supplying the Town. Town officials believe that switching to a less aggressive water supply will significantly lower the effluent zinc concentrations present at the Facility. The proposed Amendment requires the completion of the new water line and compliance with zinc effluent limits by July 1, 2013, and assesses a civil charge. Civil Charge: \$1,050

Kenneth and Lora Dotson Locust Grove Town Center Sewage Treatment Plant, Orange Co. - Consent Special Order with Civil Charges: Locust Grove Town Center Sewage Treatment Plant (STP) is a 0.0045 MGD STP consisting of multi-flow units with internal filtration (ATU’s), a constructed wetland and disinfection. The STP is owned by Kenneth and Lora Dotson (Permittee) and is operated by Dabney & Crooks, Inc. DEQ issued a Conditional Certificate to Operate (CTO) on March 26, 2009. The Conditional CTO provided the Permittee the opportunity to operate the STP as designed for one year with increased sampling for Total Phosphorous (TP). The Conditional CTO was issued recognizing that the STP might not be able to meet the TP limits. The Conditional CTO stated that if the STP was unable to meet effluent limits during the one year time period, then design changes would be required. The Permittee was referred to enforcement in June 2009 for violating the Permit limits for Total Kjeldahl Nitrogen (TKN), Total Suspended Solids (TSS), and TP. On August 6, 2009, the Permittee met with DEQ to discuss the Notice of Violation (NOV) dated June 9, 2009. At the meeting the Permittee stated that the violations were because the STP began operating in December 2008, prior to the proper preparation of the constructed wetland (polishing pond). The violations listed in the NOV occurred because the wetland was taken off-line to facilitate planting. The Permittee stated that the TSS violations were attributable to the first washing out of the wetland and the TKN and TP violations were due to the polishing pond establishment period. After the violations occurred at the STP, a direct alum feed was installed into the system to remove the phosphorus. The Permittee continued to operate the STP out of compliance with the Permit, and DEQ issued NOVs to the Permittee in August 2009, November 2009, February 2010, March 2010, April 2010, May 2010, and June 2010. On April 8, 2010, the Permittee met with DEQ to discuss the newer violations and proposed potential methods to correct the issues at the Plant. The changing of the current location of the alum feed, thought to have a negative effect on nitrification, was presented as a possible solution. The design change and evaluation process was incorporated as a year-long pilot study into a Letter of Agreement (LOA). The pilot study was submitted to DEQ on April 9, 2010 and approved on May 13, 2010. A LOA including the pilot study was entered into on June 15, 2010. The STP was still experiencing compliance issues and DEQ issued NOVs in November 2010, March 2011, April 2011, May 2011, and June 2011. On June 29, 2011, per the terms of the LOA, the Permittee submitted to DEQ a “Pilot Study Review and Recommendations” for the Facility based on data collected from May 2010 through April 2011. The document stated that the alum injection had been effective for the treatment of TP. Yet the report recommended that

a separate, larger tank with a discharge filter should be installed to manage solids and provide additional time for treatment. The report stated that steps taken during the pilot study did not resolve the issues with TKN and recommended that the following options could be implemented: routine addition of soda ash to the equalization basin to assure adequate alkalinity is available for nitrification; review and verification of equalization control panel settings to assure available capacity is being utilized and that pump settings are delivering routine small transfers to the ATUs throughout the day; ATU weekly temperature monitoring from December – March; ATU discharge weekly monitoring for Ammonia-N (process control testing); and the review and investigation of influent sources (businesses) in order to determine the source of and encourage the limiting of the use of any detergents which contain phosphorus or ammonia. In July 2011 and August 2011, DEQ issued NOV's to the Permittee for effluent violations. The Permittee continued to violate the Permit limits during the less formal enforcement mechanism of the LOA. The attempts to adjust the treatment process during the Pilot Study have failed and therefore the next step is to resolve the violations through a Consent Order with a civil penalty and injunctive relief. The Appendix will require the Permittee to submit to DEQ for review and approval, a plan to upgrade or replace the STP in order to meet Permit limits within 30 days of the execution of the Order and monitor the influent monthly for TKN, cBOD₅, TSS, and TP for one calendar year beginning the month after the effective date of this order. The estimated cost of complying with the Appendix is \$70,000 – \$150,000. Civil Charge: \$3,150.

Fairfax County Board of Supervisors/Noman M. Cole, Jr. PCP - Consent Special Order with Civil Charges:

Fairfax County Public Works and Environmental Services (Fairfax County) operates the Noman M. Cole, Jr. Pollution Control Plant (Facility) located in Lorton, Virginia and the associated sanitary sewer collection system. The Facility is a 67 MGD Plant subject to VPDES Permit Number VA0025364 which authorizes the discharge of treated effluent into an unnamed tributary (UT) of Pohick Creek located within the Potomac River Watershed. On December 14, 2010, Fairfax County reported an overflow of an on-site septage tank at the Facility causing approximately 10 gallons of raw sewage to discharge into Pohick Creek. According to Fairfax County the discharge was caused by two events: first the tampering with a valve in the septage dump site by a septage hauler and second, another hauler dumping in the incorrect location. The valve has since been repaired.

On January 19, 2011, Fairfax County reported a discharge of approximately 580,000 gallons of tertiary/ferric chloride sludge at the Facility into the onsite creek (Storm drainage ditch), which leads to Pohick Creek. According to Fairfax County this was caused by the mislabeling of a drain. The drain was labeled as being connected to the Plant's head works and instead it should have been labeled as going to Pohick Creek. As a result of the mislabeling, a third-party contractor working on-site discharged the sludge down the mislabeled drain. The mislabeling at the Facility has been corrected. Fairfax County reported in a letter, dated July 29, 2011, that approximately 7,000 gallons of sludge and storm water mix was recovered. On February 24, 2011, Fairfax County reported an overflow from manhole #37 of approximately 1,800 gallons of raw sewage into an Unnamed Tributary (UT) of Rabbit Branch. Fairfax County indicated that this was caused by the clogging of the line by fats, oils and grease (FOG) from a nearby restaurant whose staff failed to use a grease trap as required by the Fairfax County Department of Health. On March 19, 2011, Fairfax County reported an unauthorized discharge from the Waynewood II Wastewater Pumping Station (127) of approximately 25,000 gallons into an UT of the Potomac River. Fairfax County explained that the pump station is equipped with a primary (bubbler system) and secondary (series of float balls) pump controls systems. Prior to the incident Fairfax County was conducting maintenance on the wet-well of the Pump Station and the secondary pump control system was activated. Even though the float balls, which were on a one year inspection cycle had been inspected 45 days prior, the secondary control system failed due to a faulty float ball, and the pump control did not revert back to the primary bubbler system after the maintenance work was completed. The high wet well alarm was then triggered, but due to miscommunication between the maintenance staff and the Trouble Response Center (remote monitoring center) the alarm was interpreted as a false alarm. The miscommunication delayed the response to the SSO. Fairfax County has implemented a revised training schedule and program to prevent similar events from occurring in the future. On May 10, 2011, Fairfax County reported an overflow from manhole #341 of approximately 5,000 gallons of raw sewage into Pohick Creek, which according to Fairfax County was caused by a piece of PVC pipe blocking the line. According to Fairfax County the line blockage was due to the failure of Virginia Department of Transportation (VDOT) to update Fairfax County with the as-built plans of the relocation of pipes as part of the Fairfax County Parkway widening project. Fairfax County was not made aware that the construction area would be in close proximity to the sewer line and of the risk of construction debris, in this case PVC pipe entering the collection system. In addition, on May 10, 2011, Fairfax County reported an overflow from manhole #52 of approximately 50,000 gallons of raw sewage into an UT of South Run. It was reported that this overflow was caused by vandalism and the resulting clogging of the upstream line. On June 6, 2011, Fairfax County reported the

unauthorized discharge from manhole #32 of approximately 2,000 gallons of raw sewage entering an unnamed tributary of Pohick Creek. It was reported that this overflow was caused by vandalism and the resulting clogging of the upstream line.

Fairfax County responded to the May and June events and after cleaning out each blockage has installed dishes (a plastic insert placed below the iron manhole cover preventing foreign objects and excess inflow from entering the pitch holes in the cover) in the manholes or bolted-down manhole covers to prevent vandalism. Many of the overflows detailed in this enforcement action were due to acts of a third-party including, miscommunication by VDOT, vandalism, septage hauler fault, and pre-treatment failures. Therefore the Consent Order and the civil penalty only address the two unauthorized discharges that occurred at the Facility and the pump station on January 19, 2011 and March 19, 2011, respectively. Both violations were due to human error and could have been avoided by Fairfax and should be resolved through the Consent Order. Civil Charge: \$15,015.

Honeywell Resins & Chemicals, LLC, Hopewell Site - Consent Special Order with Civil Charges: The Facility has multiple outfalls including Outfall 001 and Outfall 002. Outfall 001 at the Facility discharges mostly non-treated water, mainly composed of non-contact cooling water into Gravelly Run. Outfall 002 at the Facility discharges non-treated water, composed of mostly non-contact cooling water into Gravelly Run UT. These outfalls are permitted under VPDES Permit No. VA0005291. On December 2, 2010, Honeywell verbally reported that on December 1-2, 2010 there was a caprolactam leak, which caused a net Total Organic Carbon ("TOC") exceedance at Outfall 002. The caprolactam was reported to have leaked from a flange on a temporary storage tank. On December 6, 2010, Honeywell submitted a five day written report confirming the information given to DEQ. Honeywell indicated that it believed the exceedances for TOC were the result of a now stopped leak of caprolactam solution to Outfall 002 from a flange on a Rain-for-Rent portable storage trailer where the caprolactam solution was being stored. On March 29, 2011, Honeywell reported that on that same day, Honeywell had a pH permit limit violation at Outfall 001. On April 1, 2011, Honeywell submitted a five day written report confirming the information given to DEQ on March 29, 2011. Honeywell indicated that it believed the Permit limits were violated due to maintenance which required the shutdown of the River Water Pump House ("RWPH"). The shutdown of the RWPH reduced flow and stream flow in Gravelly Run was significantly reduced. Honeywell had not identified the cause of the pH violations. On June 30, 2011, Honeywell reported that on that June 29, 2011, a major river water leak led to a shutdown of the RWPH, which caused violations of the pH permit limits. On July 1, 2011, Honeywell submitted a five day written report confirming the information given to DEQ on June 30, 2011. Honeywell indicated it had identified the source of the pH violation for Outfall 002, but that the source of the pH violation for Outfall 001 had not been identified, and was continuing its investigation. Honeywell informed DEQ staff that the source of the pH violation for Outfall 002 in June 2011 was a leak from an acid cooler which had been addressed. Honeywell agreed to the Consent Special Order with DEQ to address the above described violations. The Order requires the payment of a civil charge and performance of one appendix item. The appendix requires Honeywell to submit to DEQ, within 60 days of the effective date of the order, for review and approval a corrective action plan ("CAP") and schedule to identify and repair the cause of the pH violations at Outfall 001. Once approved by DEQ the CAP will be implemented. Such CAP and schedule must contain a completion date no later than 12 months from the date the CAP is submitted to DEQ. Civil Charge: \$14,870.

Advanced Flooring Technologies of Virginia, Inc., Goochland Co. - Consent Special Order w/ Civil Charges: On June 28, 2011, DEQ received a report from the Richmond Department of Public Utilities (DPU) of an unpermitted discharge of commercial carpet cleaning wastewater from an Advanced Flooring Technologies of Virginia, Inc. (Advanced Flooring) truck, into a carwash drop inlet located at the Forest Ridge Apartments. The unpermitted discharge of the carpet cleaning wastewater flowed from the carwash drop-inlet into a UT of the Powhite Creek. On that same day, June 28, 2011, the Richmond DPU investigated the unpermitted discharge, photo-documented the discharge area and collected samples from the UT to Powhite Creek. The Richmond DPU requested and received the material safety data sheets (MSDS) from Advanced Flooring for review. Copies of the inspection report, photos, sample results, and MSDS were forwarded to DEQ. On August 15, 2011, a Notice of Violation (NOV) was issued to Advanced Flooring, based on the report of the unpermitted discharge and information DEQ received from the Richmond DPU. The NOV was issued for an unpermitted discharge of commercial cleaning wastewater to the UT to Powhite Creek. In response to the NOV, Mr. Draper, the CEO of Advanced Flooring, met with DEQ on August 25, 2011 to discuss resolution of the NOV. Mr. Draper stated that the employee responsible for the unpermitted discharge had been disciplined and that the employees are required to discharge the cleaning wastewater through a filter bag, which takes out the fibers, and into a drive through car

wash drop-inlet that drains into a wastewater collection system. Mr. Draper requires that the employees sign an agreement with Advanced Flooring to discharge the cleaning wastewater at appropriate discharge locations and to keep a log of when and where the cleaning wastewater is discharged. Advanced Flooring Technologies of Virginia, Inc. agreed to the Consent Special Order with DEQ to address the above described violations. Since all of the corrective actions (i.e. discipline of an employee) have been completed, the Order only requires the payment of a civil charge. DEQ staff estimated the cost of injunctive relief to be less than \$100 (i.e. the salary cost allocable to the disciplinary event). Civil Charge: \$6,500.

Ivy Walk Apartments, The Vistas Apartments Limited Partnership and Brisben Lakeview Limited Partnership, Chesterfield Co. - Consent Special Order with Civil Charges: On June 17, 2010, DEQ staff received notification from Chesterfield County of an ongoing sewage pump station overflow at Ivy Walk Apartments. The Vistas Apartments Limited Partnership and Brisben Lakeview Limited Partnership (Partnerships) did not notify DEQ of the discharge. DEQ staff inspected the sewage pump station at Ivy Walk Apartments (Facility) and found evidence of an unpermitted discharge of 25,000 gallons of sewage which overflowed from the Facility into Falling Creek Reservoir. DEQ staff observed two large vacuum trucks operated by two contractor companies which were in the process of cleaning up the overflow. All of the areas of the overflow had not been treated, and the manager of Ivy Walk and the contractors were directed to do so by DEQ staff. Upon inspection, only one pump at the Facility was in operation and the second pump and standby pump were not operational. By the end of June, 2010, repairs by a local contractor were completed to the two pumps at the Facility. At that time the Facility was again operational with two pumps, however, the backup generator and standby pump had not been fixed. At the end of September, 2010, the contractor was notified by Ivy Walk maintenance staff that the Facility had again experienced an unpermitted discharge of 10,000 gallons of raw sewage which overflowed from the Facility into Falling Creek Reservoir. The contractor subsequently reported the overflow to Chesterfield County staff who notified DEQ staff. After the September 2010 overflow, the contractor found that the audible alarm was not operational however, the visual pump failure alarm at the Facility functioned as designed. Ivy Walk maintenance staff had failed to see the visual alarm as Ivy Walk maintenance staff had not checked the pump station as often as required and instructed by DEQ staff and the contractor, resulting in the overflow. The Facility had on site an automated system that is capable of alerting maintenance personnel by phone or email when the Facility alarm goes off. This system, though required to be installed by Chesterfield County, was never completely installed. After the September 2010 overflow, the contractor returned the two Facility pumps to proper operation. The contractor informed Ivy Walk maintenance staff that without ongoing solids removal the Facility could be expected to fail a third time in the near future. On October 19, 2010, DEQ staff performed a follow up inspection at the Facility and found the backup generator was not in working order, and the high level alarm was not fully operational as only the light worked and the audible alarm was not functional. DEQ staff observed evidence of another overflow, that did not reach state waters, as there was sewage related debris down slope from the wet well at the Facility. On November 18, 2010 the backup generator at the Facility was repaired and covered under a maintenance agreement. DEQ issued a NOV on December 6, 2010. On September 6, 2011 the Partnerships confirmed that the automated alarm system for the Facility is in place and working. The alarm system alerts both the on-site property manager and the contractor that Partnerships has hired to maintain the Facility. Partnerships agreed to the Consent Special Order with DEQ to address the above described violations. The Order requires the payment of a civil charge and one appendix item. The appendix requires the Partnerships to submit, starting January 31, 2012, to DEQ, evidence of a separate account containing \$8600 to pay for one year of a maintenance contract with a qualified contractor to continue ongoing solids removal and pump repairs as needed at the Facility. Partnerships must submit monthly balance statements, until January 31, 2013, to DEQ showing that the necessary funds to pay for the balance of the one year maintenance contract are available in the account. To date the Partnerships have complied with this appendix item of the order. Civil Charge: \$50,000.

The Lee County Public Service Authority – Hickory Flats WWTP - Consent Special Order w/civil charges: The Lee County Public Service Authority owns and operates the Hickory Flats Wastewater Treatment Plant. The PSA discharges treated sewage and other municipal wastes from the WWTP to the Powell River through outfall no. 001, which is authorized by VPDES Permit No. VA0089397. The design flow of the WWTP is 0.800 MGD. SWRO issued Warning Letters and NOV's for violations of the permit's final effluent limits for Total Kjeldahl Nitrogen, Dissolved Oxygen and E. Coli, for poor or improper operation and maintenance of the WWTP, for failure to submit sludge DMRs, for an incomplete final effluent DMR, for late submittal of the application for reissuance of the permit and for overflows from the PSA's treatment system. Although the PSA and its consultant have responded in writing to Warning Letters and

NOVs, and some repairs were made, with the problems later reoccurring, all of the items noted above remain outstanding. The consent order contains a civil charge and a schedule of compliance. The schedule of compliance addresses: 1) installation of a new aeration system in the aerobic digesters; 2) repair or replacement of other mechanical maintenance items noted, both at the WWTP and at the associated pump stations; 3) operational concerns regarding odor control; 4) the requirement to comply with O&M staffing requirements; and 5) concerns regarding financial budgeting to fund normal maintenance needs at the WWTP. The estimated cost of facility upgrades required by the consent order is \$1,856,391.00. Construction is projected to be complete by May 31, 2013. Civil Charge: \$14,125.

Carrollton Used Auto Parts, Inc. (Joe's Auto Parts), Isle of Wight Co. - Consent Special Order with a civil charge: Carrollton Used Auto Parts, Inc. ("Carrollton") owns and operates Joe's Auto Parts, an automobile salvage yard ("Facility") in Isle of Wight County, Virginia, at which used motor vehicles are dismantled for the purpose of selling and recycling used automobile parts and/or scrap metal. Storm water discharges from the Facility are subject to the Permit through Registration No. VAR050280, which was effective July 1, 2009, and expires June 30, 2014. The Permit authorizes Carrollton to discharge to surface waters storm water associated with industrial activity under conditions outlined in the Permit. As part of the Permit, Carrollton is required to provide and comply with a Storm Water Pollution Prevention Plan ("SWP3") for the Facility. The Facility is also the subject of a Special Order by Consent with the State Water Control Board, effective December 10, 2010 ("2010 Order"), for deficiencies noted during a February 4, 2010, DEQ compliance inspection. On May 24, 2011, DEQ compliance and enforcement staff conducted an inspection of the Facility that revealed the following: failures to timely submit a Discharge Monitoring Report ("DMR") recording benchmark monitoring of storm water discharges for one monitoring period; failures to perform quarterly visual examination of storm water quality for two quarters, quarterly Facility inspections for two quarters, and one annual comprehensive site compliance evaluation ("CSCE"); failure to maintain the Facility in a clean, orderly manner; and failure to comply with the requirements of the 2010 Order by not submitting a revised SWP3 and copies of reports of Facility inspections, employee training and quarterly visual examinations of storm water quality by the dates required by the 2010 Order; by not performing benchmark monitoring of storm water discharges during one "makeup" monitoring period; and by not timely submitting a DMR recoding benchmark monitoring performed during another "makeup" monitoring period. On August 1, 2011, DEQ issued a Notice of Violation ("NOV") advising Carrollton of the deficiencies revealed during the Facility inspection conducted on May 24, 2011. A representative of Carrollton responded to the report of the May 24, 2011, compliance inspection by undated letter received at DEQ on July 26, 2011, and to the NOV by electronic mail on August 11, 2011. Those responses stated that the housekeeping deficiencies had been corrected and the inventory of scrapped vehicles at the Facility reduced substantially. Photographs of the Facility improvements were included as were a copy of a CSCE performed on May 24, 2011, and a Facility inspection and a record of employee training in storm water pollution prevention both conducted on July 6, 2011. The Carrollton representative attributed the failures to timely submit DMRs for two of the three benchmark sampling events to administrative oversight. The Consent Special Order ("Order") requires Carrollton to pay a civil charge within 30 days of the effective date of the Order. To ensure continued compliance with the Permit and the SWP3 the Order requires Joe's to submit by April 10, 2012, an updated SWP3 that includes all elements required by the Permit; to submit documentation of routine inspections and visual examinations of storm water quality for four calendar quarters, with the first submittal also due by April 10, 2012; and to perform additional benchmark monitoring of storm water discharges at the permitted storm water outfall during calendar year 2012. Civil Charge: \$6,000 civil charge.

Kerr's Creek, LLC ("Kerr's Creek"), Rockbridge Co. - Consent Special Order - Issuance: Kerr's Creek, LLC owns and operates the Facility, located in Rockbridge County, Virginia, which serves the site of a former mobile home park with one active connection. The permit authorizes Kerr's Creek to discharge treated wastewater from the Facility to Linkswiler Branch from Outfall 001 or Kerr's Creek from Outfall 002, in strict compliance with the terms and conditions of the permit. On February 10, 2010, December 1, 2010, and January 1, 2011, DEQ notified Kerr's Creek of outstanding payments of the annual permit maintenance fees for 2009 and 2010. The permit reissuance application for the Kerr's Creek discharge was received on March 14, 2011 and was deemed technically complete on March 30, 2011. On May 10, 2011, DEQ notified Kerr's Creek that DEQ was considering the reissuance of the permit and provided Kerr's Creek with the public notice and draft permit package. DEQ also indicated that there were outstanding annual permit maintenance fees associated with Kerr's Creek and that the permit could not be reissued until the outstanding annual permit maintenance fees were paid in full. On July 31, 2011, Kerr's Creek Permit expired because Kerr's Creek had not paid the annual permit maintenance fees for the 2009 and 2010 billing years. During discussions with DEQ staff, Kerr's Creek

asserted that financial difficulties had prevented timely fee payment; it also confirmed its commitment to follow a proposed plan and schedule to pay the outstanding annual permit maintenance fees. In order for Kerr's Creek to return to compliance, DEQ staff and representatives of Kerr's Creek have agreed to the schedule of payment, which is incorporated in Section D of the proposed Order. The proposed Order contains a schedule to make payments for the outstanding permit maintenance fees for 2009, 2010 and 2011. The permit is expected to be reissued by March 1, 2012.

E&A Call, Inc. Manchester Subdivision, Louisa Co. - Consent Special Order- Issuance: Manchester Subdivision (Property) is an approximately 90-acre residential development in Louisa County. On January 25, 2010, DEQ received a report from Louisa County Staff that unauthorized clearing and filling of surface waters at the Property may have occurred. DEQ staff later confirmed that E&A Call, Inc. (E&A Call) had impacted approximately 0.14 acre of Palustrine Forested Wetland (PFO) and 528 linear feet of stream without prior authorization. In discussions with DEQ, Mr. Call noted that he was not aware that he needed to obtain a Permit from DEQ or the United States Army Corps of Engineers prior to commencing activities at the Property. The Order requires E&A Call to immediately cease any activities that impact surface waters that require authorization from the VWP Permit Program unless authorization from DEQ is granted via a Permit. The Order also requires E&A Call to provide compensation for unauthorized impacts to approximately 0.14 acre of PFO by purchasing 0.28 credit from a DEQ approved wetland mitigation bank, or in the alternative, from the Virginia Aquatic Resources Trust Fund. Proof of said purchase shall be submitted to DEQ. In addition, the Order requires E&A Call to provide compensation for unauthorized impacts to approximately 528 linear feet of stream channel by purchasing 57 stream credits from a DEQ approved stream mitigation bank, and by completing the off-site preservation of 2,970 linear feet of stream channel with 25.2 acres of associated riparian buffer, equivalent to 505 stream credits in accordance with the Stream and Buffer Preservation Map approved by DEQ on March 18, 2011, and the Draft Declarations of Restrictions received on March 22, 2011. The Consent Order also requires E&A Call to remove and restore Impact PR5 on the Property in accordance with the Proposed Culvert Removal and Stream Stabilization Plan received by DEQ on April 5, 2011.

HH Hunt Homes, LC, Henrico County - Consent Special Order with Civil Charges: Hunt owns and developed the Property in Henrico County, Virginia. On June 2, 2005, DEQ issued permit WP4-05-0593 to Eagle Construction of Virginia, Inc. The permit was transferred to Hunt on October 3, 2005 by a Change of Ownership Agreement Form submitted to DEQ. The permit authorized impacts to 0.005 acres of palustrine forested wetlands, 0.476 acres of palustrine emergent wetlands and 1.042 acres of open water. The permit required the purchase of 0.49 acres of wetland credits. The permit also required notification of construction to DEQ, submitted prior to commencement of activities in permitted impact areas and construction monitoring reports submitted to DEQ in association with the permitted activities. A site inspection revealed that the authorized impacts began between June 2005 and May 2006, and are now complete. DEQ staff reviewed the file for permit WP4-05-0593 and found no record of documentation that mitigation bank credits were purchased; no record of a notification of construction submitted prior to commencement of activities in permitted impact areas; and no record of construction monitoring reports submitted in association with the permitted activities. DEQ issued a NOV to Hunt for violation of the permit and Virginia Code and regulations. Hunt submitted a written response to the NOV stating they had not purchased the credits but would do so. Hunt purchased 0.49 acres of wetland credits as required by the permit and agreed to the Consent Special Order with DEQ to address the above described violations. Civil Charge: \$7,800.

Wilton Development Corporation, Henrico County - Consent Special Order: Wilton previously owned and developed the Property in Henrico County, Virginia. On February 27, 2006 DEQ issued permit WP4-05-2643 to Wilton. The permit authorized impacts to 0.32 acres of palustrine forested wetlands. The permit required the purchase of 0.64 acres of wetland credits from the Willis River Mitigation Bank located in Buckingham County, Virginia. The permit also required notification of construction to DEQ, submitted prior to commencement of activities in permitted impact areas and construction monitoring reports submitted to DEQ in association with the permitted activities. On February 12, 2008, DEQ staff received notice of project completion. On February 3, 2011, DEQ staff reviewed the file for permit WP4-05-2643 and found no record of documentation that mitigation bank credits were purchased; no record of a notification of construction submitted prior to commencement of activities in permitted impact areas; and no record of construction monitoring reports submitted in association with the permitted activities. On February 23, 2011, DEQ issued NOV No. 11-02-PRO-700 for the violation of permit WP4-05-2643. On June 22, 2011, the Office of Financial Assurance completed a review of the financial information submitted by Wilton found that Wilton could not currently afford to pay

for wetland credits, or pay a penalty. Wilton agreed to a Consent Special Order with DEQ to address the above described violations. The Order requires Wilton to deed restrict 21.460 acres containing 6.69 acres of wetlands adjacent to Glendale Estates in Henrico County, Virginia. This is a higher ratio than is required for preservation. Wilton has complied with this requirement of the order.

Synagro Central, LLC, Essex, Goochland, & Fauquier Counties - Consent Special Order with Civil Charges:

Woodworks Associates LP property: is a farm (a.k.a. Deaton Site) containing an uncovered biosolids storage pad (Pad) that is operated by Synagro Central, LLC (Synagro). The Pad consists of an uncovered rectangular layer of asphalt and was designed to divert storm water runoff to the east side of the Pad, where a forested buffer is to absorb remaining pollutants. However, it does not function as designed and a small ditch transports the storm water runoff from the Pad for approximately 200 feet before discharging into an unnamed tributary to Dragon Run. On November 25th, December 7th, 9th, and 11th of 2009 and January 5th and 12th of 2010, DEQ staff observed discharges of contaminated stormwater into State waters which originated from biosolids stored on the Pad. On December 7, 2009, DEQ staff took confirmatory samples and observed impacts to the tributary from the discharge off the Pad. Lanier property: The Lanier property is a farm (a.k.a. Lanier Site) containing an uncovered biosolids storage Pad that is operated by Synagro. The Pad is an uncovered rectangular layer of asphalt positioned and surrounded on three sides by temporary concrete walls to divert storm water runoff to one corner of the Pad. The storm water runoff is then directed through a metal pipe and discharged to a riprap lined conveyance channel, through unnamed tributaries and ultimately to Big Lickinghole Creek. On June 5, 2009 and January 22, 2010, DEQ staff observed discharges of contaminated stormwater into State waters which originated from biosolids stored on the Pad. Observations noted and a video taken during the inspection indicate the discharge of stormwater runoff caused excessive growth of bacterial colonies in the form of mats and slimes. On March 12, 2010, the Department issued Notice of Violation No. W2010-03-P-301 to Synagro for unpermitted discharges at the Deaton Site and the Lanier Site. The C.L. Ritchie property is a farm (a.k.a. Ritchie site) containing a Storage Lagoon that is operated by Synagro. On November 13, 2009, DEQ staff arrived at the site of the Storage Lagoon during a rain event. The Site had received approximately four inches of rain over the previous three to four days. While DEQ staff were onsite, staff observed that the Storage Lagoon had residual biosolids, and that the storage capacity of the Lagoon had not been reached despite the rain event. DEQ staff also observed an employee of Synagro irrigating supernatant from the Storage Lagoon onto an adjacent farm field. The employee stated that he had been irrigating the supernatant for four and a half hours. Supernatant is defined as the liquid obtained from the separation of suspended matter during sludge treatment or storage. After reviewing Synagro's calibration report for the irrigation system, DEQ staff estimated that approximately 63,000 gallons of supernatant had been land applied on less than one tenth of an acre during a rain event, onto an already saturated field in violation of the VPA Permit Regulation and Synagro's Operation and Maintenance (O&M) Manual. DEQ staff also observed runoff leaving the irrigation site and entering an unnamed tributary to Browns Run by way of a grassed waterway. On December 22, 2009, the Department issued Notice of Violation No. 2009-12-N-001 to Synagro for violations at the Ritchie Site. On May 5, 2010, the Department met with Synagro to discuss the resolution of the violations at all three facilities. At the Deaton and Lanier Sites, the Consent Order requires Synagro to either cover the Pads to prevent comingling of biosolids with stormwater or discontinue Pad use by April 30, 2012. At the Ritchie Site (Storage Lagoon), Synagro must submit a revised and complete O&M Manual to DEQ by March 15, 2012, and respond to any comments made by DEQ on the O&M Manual within the timeframe provided by DEQ. The revised O&M Manual must include, but not be limited to, site management practices to address the handling of supernatant during wet weather. Upon approval, the O&M Manual will be an enforceable part of the C.L. Ritchie VPA Permit. At the Deaton and Lanier Sites injunctive relief depends upon the course of action. If Synagro opts to continue using the Pads then they must be covered which could cost up to \$100,000. If Synagro decides to discontinue use of the Pads, then the costs would be minimal. The cost of updating the O&M Manual is expected to be less than \$500. Civil Charge: \$65,000 with \$48,750 offset by a Supplemental Environmental Project (SEP). The SEP to be performed by Synagro is to study, develop, and implement best management practices (BMP) for agriculture that will reduce the amount of nitrogen lost to the environment and to educate farmers on the benefits of implementing the BMP.

Allen L. Shank, Rockingham County - Consent Special Order w/ Civil Charges & SEP: Allen Shank, owns and operates a confined animal feeding operation (non-permitted dairy farm), in Rockingham County, Virginia. On March 12, 2009, DEQ staff responded to a complaint that liquid dairy manure was discharging into Spring Creek from Mr. Shank's farm. DEQ staff observed an overflow of the manure running down the hill from the storage pit for Mr. Shank's farm and into Spring Creek. The overflow appeared to be caused by two tire ruts made into the side of the storage pit combined

with the use of too much water during cleaning operations. During the investigation, Mr. Shank confirmed for DEQ staff that the discharge began on March 11, 2009 and that he did not report it to the DEQ. Mr. Shank allowed a discharge of liquid dairy manure, a noxious or deleterious substance, to discharge into state waters, without a permit to do so, in violation of Va. Code § 62.1-44.5(A)(1). He also failed to report the discharge to DEQ in violation of Va. Code § 62.1-44.5(B). DEQ issued a Notice of Violation (NOV) to Mr. Shank on March 27, 2009 for these violations. On April 7, 2009, DEQ staff met with Mr. Shank to discuss the noted violations and potential remedies. The Order requires the performance of a SEP and payment of a civil charge. Mr. Shank immediately showed interest in performing a SEP. The SEP chosen was the installation of solids separator for the dairy manure waste stream, which would reduce the volume sent to the storage pit and allow for the transport of nutrients for land-application onto remote fields. This SEP has required two years of preparatory groundwork and multi-agency coordination before it could be realized. No further manure discharges have been reported or observed from Mr. Shank's farm and adequate free-board has been observed in the storage pit at each subsequent inspection, the last of which was performed on January 18, 2012. The cost to comply with the order was less than \$1000. Civil Charge: \$11,700 with \$8,775.00 of the civil charge being offset pending completion of the SEP, with the remainder paid in cash.

Windcrest Holsteins, Inc., Rockingham County - Consent Special Order w/ Civil Charges: Windcrest owns and operates a 500 head dairy with associated manure storage and handling facilities in Timberville, Virginia. The site is subject to a Concentrated Animal Feeding Operation (CAFO) Permit, which allows Windcrest to manage pollutants created by dairy cattle. On October 4, 2011, DEQ staff performed a site inspection for compliance with the requirements of the State Water Control Law, the Permit, and the Regulation. Department staff observed the overflow of manure from the Manure Storage Cell #1 which flowed through a silage storage area and into a spring fed channel which flowed into the North Fork Shenandoah River. The amount of manure released was estimated to be between 24,000 and 120,000 gallons. Staff obtained samples of the material spilled as well as stream samples both upstream and downstream of the release. The overflow was caused by operator error; the influent valve to Manure Storage Cell #1 was open while the effluent valve was closed, allowing material to build up in the cell until it overflowed. During the inspection, Windcrest asserted that it had just become aware of the release and planned to notify DEQ. On October 27, 2011, DEQ received laboratory analysis results of the samples taken on October 4, 2011. These results indicated that river samples upstream of the release contained 25 E. coli colonies per 100 ml and that river samples downstream of the release contained at least 2000 E. coli colonies per 100 ml which exceeded the water quality criteria for fresh water. The proposed Order requires payment of a civil penalty and physical changes to the facility to prevent future overflows. Civil Charge: \$6,825.

Dinwiddie County School Board Dinwiddie Middle School - Consent Special Order w/ Civil Charges: The Dinwiddie County School Board (School Board) is the operator of a 10,000 gallon aboveground storage tank (AST) located at the Dinwiddie Middle School (School) in Dinwiddie County, Virginia. The AST contains heating oil for the School. On the morning of March 29, 2010, the School Board discovered that oil had discharged from a failed L-shaped fuel line connection from the AST fuel system. Upon discovery, the School Board contacted the Dinwiddie Emergency Services and DEQ to report an unauthorized discharge of oil from the School AST to state waters. The Dinwiddie Emergency Services immediately began containment and cleanup activities of the discharged oil. On the following day, March 30, 2010, the contractor for the School Board mobilized to the site of the oil discharge and deployed additional booms and absorbent pads and subcontracted for the disposal of the removed oil. Oil cleanup and removal activities continued until June 4, 2010. On June 10, 2010, the contractor for the School Board submitted a report to DEQ that described the cause, extent and impact of the oil discharge, the remediation activities, and closure of the site. The report stated that approximately 200 – 800 gallons of oil had discharged from the AST. DEQ approved closure of the site on September 21, 2010. The School Board has taken steps to prevent a similar occurrence by replacing fuel lines connected to the AST, installing mechanical safety devices on each fuel supply line, installing an electronic device in the drain pans that will send a signal to cut off the machines in the event of another leak, and provide an audible alarm for up to 36 hours. The Dinwiddie County School Board agreed to the Consent Special Order with DEQ to address the above described violations. Since all of the corrective actions have been completed, the Order requires the payment of a civil charge. DEQ staff estimated the cost of injunctive relief to be approximately \$5000. Civil Charge: \$4,750

High Up Dairy Mart, Inc., Frederick and Shenandoah Counties - Consent Special Order w/ Civil Charges: High Up Dairy Mart, Inc. (High Up), owns and operates underground storage tanks (UST) facilities in both Frederick and Shenandoah Counties, Virginia. On July 1, 2010, DEQ performed an inspection at Gas Mart #6 and, while reviewing the

release detection records discovered that numerous suspected releases occurred and the suspected releases had not been reported or investigated by High Up. High Up had also failed to have the corrosion protection system for the USTs tested, but resolved that violation on August 9, 2010. DEQ staff issued a Notice of Violation (NOV) on August 31, 2010, for failure to report the multiple suspected releases of petroleum in violation of 9 VAC 25-580-190. High Up met with DEQ staff on September 15, 2010 to discuss the violations and potential resolutions. DEQ staff received an investigation report from High Up confirming that a release of petroleum had not occurred and closed Pollution Complaint (PC) #2011-6003. On October 20, 2010, DEQ staff received written notification from a third party that a suspected release of petroleum had occurred at Gas Mart #8. DEQ staff performed an inspection on October 28, 2010, in response to this notification. They reviewed documentation that confirmed that water was removed from UST #2 four times between September 7 and 17, that it failed a precision tank tightness test on September 13, and was removed from service on September 17, 2010. All of these are indicative of a suspected release of petroleum which must be reported to the DEQ within 24 hours of discovery. DEQ staff issued a NOV to High Up on December 1, 2010, for failure to report a suspected release in violation of 9 VAC 25-580-190. High Up met with DEQ staff on December 20, 2010, to discuss the violations and potential resolutions. DEQ staff confirmed that a release had occurred from UST #2 and subsequently closed the associated PC, #2011-6038 on January 25, 2012, after evaluating its limited impact on the environment. The Order requires submittal of release detection records to DEQ for all USTs at both facilities over the next three months. In addition, High Up must either temporarily close, or permanently close UST #2 at Gas Mart #8. The cost for compliance for each PC case would be limited to High-Up's VPSTF (tank fund) deductible amount of \$5,000 per release. After that amount is reached, the tank fund reimburses responsible parties for the remaining costs associated with the investigation and remediation of petroleum releases. Civil Charge: \$12,425.

VEPCO North Anna Part III VWP Permit (Louisa Co.) - Pages 56-75

Reissuance of a Virginia Pollutant Discharge Elimination System Individual Permit Lake Anna Environmental Services Sewage Treatment Plant – VA0072079 Louisa County: Lake Anna Environmental Services, Incorporated is authorized to discharge 0.020 million gallons per day (MGD) from the Lake Anna Environmental Services STP by VPDES Permit No. VA0072079. The treated effluent discharges into Lake Anna in Louisa County.

The application for the reissuance of the aforementioned permit was due March 11, 2011. Both the initial submittal and the subsequent request for a revised application were submitted late. As such, the permit has not been administratively continued and the facility has not been authorized to discharge since the expiration of the permit on September 11, 2011. The applicant requested that the current permitted design capacity of 0.020 MGD be carried forward with this reissuance and also requested an additional flow tier of 0.099 MGD. In accordance with Section 62.1-44.15:4 of the Code of Virginia, DEQ notified the Louisa County and Spotsylvania County Administrators and the Louisa County and Spotsylvania County Board of Supervisors of the proposed expansion associated with the reissuance by letter dated April 27, 2011. Riparian property owners identified one half mile upstream and one half mile downstream of the discharge location on both the Louisa County and Spotsylvania County shores of Lake Anna were also notified of the proposed expansion by letter dated April 27, 2011.

Draft Permit:

The draft permit was prepared to protect the Virginia Water Quality Standards (9VAC25-260 et seq.) applicable to the receiving stream, Lake Anna. These are the same standards used to characterize and protect all waters of the Commonwealth. The permit as drafted meets the applicable regulatory standards that have been established to protect the water quality of Lake Anna and its beneficial uses.

Public Notice of Draft Permit:

The public notice for this proposed permit action was published in *The Free Lance Star* and *The Central Virginian* on October 13, 2011, and October 20, 2011. The 30-day public comment period ran from October 14, 2011, through November 14, 2011.

Public Comments:

During the draft permit public comment period, DEQ-NRO received comments from 103 citizens and/or organizations via mail, email, and fax. Four additional sets of comments were received after the close of the comment period. At the close of the comment period, a total of 99 requests for a public hearing were received.

Authorization of Hearing:

The Agency Director authorized the convening of a public hearing for the proposed permit reissuance on December 9, 2011.

Public Notice of Public Hearing:

Notice of the public hearing and comment period was published in *The Free Lance Star* and *The Central Virginian* on December 22, 2011, and December 29, 2011. The public comment period ran from December 23, 2011, through March 2, 2012.

Public Hearing:

The public hearing was held at 7:00 p.m. on February 9, 2012, at The Forum of the Louisa County Middle School. Dr. Thomas Van Auken served as the hearing officer. A question and answer session preceded the hearing.

Twenty-nine people provided oral comments at the public hearing with approximately one-hundred thirty people in attendance. The following organizations provided comments:

- Louisa County Board of Supervisors
- Lake Anna Environmental Services, Incorporated
- Lake Anna Civic Association
- Friends of Lake Anna

Summary of Comments

All comments received in response to the permitting action are available upon request.

It is important to note that the Louisa County Board of Supervisors provided written comments on the permitting action by letter dated March 1, 2012. The Louisa County Board of Supervisors voted 6-0 (one member absent) to oppose reissuance of the permit with the requested expansion level to 0.099 MGD. The Board of Supervisors is supportive of the reissuance of the permit at the current design flow of 0.020 MGD.

Of the many comments received, four primary recurring issues were raised during the public participation process. These issues along with staff responses are summarized below.

1. Statement of Need

Lake Anna Environmental Services, Incorporated is authorized to discharge 0.020 million gallons per day (MGD) from the Lake Anna Environmental Services STP. The treated effluent discharges into Lake Anna in Louisa County. With this reissuance, the applicant requested that the current permitted design capacity of 0.020 MGD be carried forward and also requested an additional flow tier of 0.099 MGD.

Many of the organizations and people who commented on this issue questioned the need for an additional flow tier and raised concerns about the impact on the water quality of Lake Anna should such a discharge be allowed.

Staff Response

A statement of need is not required by the Virginia Pollutant Discharge Elimination System (VPDES) regulation. As explained by the permittee during the public participation process, the request for an expansion has been made in anticipation of future need due to continued growth in the area. However, there is no requirement to justify the request or to demonstrate the need for the expanded flows. An applicant may request an expansion without limitation of flow; DEQ has no authority under statute or regulation to deny the request for expansion to 0.099 MGD as long as a permit can be prepared to ensure protection of water quality. The draft permit was prepared in response to the application received and ensures that the Virginia Water Quality Standards (9VAC25-260 et seq.) applicable to the receiving stream, Lake Anna, are maintained and protected.

2. Coordination with and Involvement of Louisa County

Many of the organizations and people who commented on this issue raised concerns about DEQ's coordination with Louisa County upon receipt of the permit application as well as Louisa County's involvement with respect to the expansion request. Many of the commenters indicated Louisa County should have a greater say in the VPDES permitting process given the request for expansion to 0.099 MGD.

Staff Response

In accordance with Section 62.1-44.15:4 of the Code of Virginia, DEQ notified the Louisa County and Spotsylvania County Administrators and the Louisa County and Spotsylvania County Board of Supervisors of the proposed expansion associated with the reissuance by letter dated April 27, 2011. Riparian property owners identified one half mile upstream and one half mile downstream of the discharge location on both the Louisa County and Spotsylvania County shores of Lake Anna were also notified of the proposed expansion by letter dated April 27, 2011. Louisa County approval of the proposed expansion is not required under statute or regulation.

In addition to the regulatory requirements for notifying localities and riparian land owners, DEQ staff has taken additional measures to coordinate with the locality and stakeholders. Prior to the public notice of the draft VPDES permit, DEQ hosted two meetings on September 9, 2011, at the Salem Church Branch of the Central Rappahannock Regional Library. The first was held with the Lake Anna Civic Association (LACA), representatives from Lake Anna Environmental Services (LAES) and DEQ. The second was held with the Friends of Lake Anna (FOLA), representatives from LAES, then Chairman of the Louisa County Board of Supervisors, and DEQ. Separate meetings were held by request. Both meetings allowed representatives from the two local organizations equal opportunity to discuss their comments and concerns, and to ask questions of DEQ and the permittee. DEQ also attended the October 3, 2011, meeting of the Louisa County Board of Supervisors to provide information on the draft permit and respond to

questions and concerns of the Board members. Following the Board of Supervisors meeting, DEQ attended meetings on November 9, 2011, and November 30, 2011, with LACA, FOLA, the Virginia Department of Health, and members of the Louisa County Board of Supervisors to discuss wastewater treatment options and concerns in general, the proposed permit action, and to plan for a public education forum on wastewater treatment options. DEQ staff participated in the education forum held in Louisa County on the evening of March 13, 2012.

It should be noted that VPDES permits do not relieve the permittee of responsibility to comply with all applicable local ordinances and requirements. Land use, zoning and development plans of Louisa County are not within the scope of the VPDES regulations. The draft permit does not supersede local government zoning and planning requirements. Specifically, 9VAC25-31-190 states that permits do not convey any property rights of any sort, or exclusive privilege.

3. Alternative Disposal Options

Staff received many comments urging DEQ to deny the requested expansion of the sewage treatment plant and/or to prohibit sewage discharges to Lake Anna, and that the applicant be required to utilize alternative disposal options so that a discharge to Lake Anna does not occur. These alternatives included sub-surface disposal, spray irrigation and/or reuse of the treated wastewater.

Staff Response

There is no regulatory authority for DEQ to require or dictate the final disposal option for the Lake Anna Environmental Services wastewater treatment facility. Staff acknowledges that there may be alternative disposal options available. However, DEQ responded to the application received from the permittee by preparing a draft permit that protects the Virginia Water Quality Standards (9VAC25-260 et seq.) applicable to the receiving stream, Lake Anna, ensuring the water quality of Lake Anna and its beneficial uses will be maintained and protected. With regard to the potential reclamation and reuse of treated wastewater, the Virginia State Water Control Law does not require the reuse of wastewater. Section 62.1-44.2 of the State Water Control Law states in part "It is the policy of the Commonwealth of Virginia and the purpose of this law to...promote and encourage the reclamation and reuse of wastewater in a manner protective of the environment and public health." While DEQ supports the reclamation and reuse of wastewater, State Water Control Law does not give the Commonwealth of Virginia authority to mandate reclamation and reuse of wastewater.

4. Failure of the Treatment Works

Many of the organizations and people who commented on this issue raised concerns about a failure of the sewage treatment works and the possible release of partially treated or untreated wastewater into Lake Anna. Commenters questioned who would be held liable to clean up any spills and what the impact of a failure would be on the water quality of Lake Anna, property values, and businesses that make their living from Lake Anna.

Staff Response

The comments and concerns raised pertain to the reliability of the treatment processes, to include the mechanical processes involved in the collection, transmission and treatment of wastewater. The draft permit published for public notice contained provisions for the reliability of the treatment works at both the current and proposed design flows. Reliability is a measurement of the ability of a component or system to perform its designated function without failure or interruption of service. Reliability requirements are established in the Virginia Sewage Collection and Treatment Regulations at 9VAC25-790 et seq.. Specification of the reliability requirements of treatment works are included in all VPDES permits for facilities treating sewage.

The final draft permit has been modified to reflect additional reliability measures developed in coordination with the permittee and stakeholders to provide extra measures aimed to prevent or minimize the likelihood of a failure and, should a failure occur, to minimize the chances of partially or untreated sewage getting to Lake Anna. The enhanced reliability special condition is summarized below:

1. The 0.020 MGD permitted treatment works shall meet Reliability Class II.
2. Upon issuance of the CTO for the 0.099 MGD flow tier, the permitted treatment works shall meet Reliability Class I.
3. Within 180 days of the effective date of the permit, the permittee shall submit to the Northern Regional Office a plan and schedule to upgrade the two existing pump stations to Reliability Class I.

4. The permittee shall be responsible for implementing and maintaining adequate safeguards to prevent the discharge of untreated wastewater and/or partially treated wastewater that has not been treated in accordance with the requirements of this permit. The permittee shall consider the following reliability features to assure that inadequately treated wastewater is not discharged to Lake Anna:
 - a. The installation of any new pump station(s), whether at the 0.020 MGD or the 0.099 MGD flow tiers, shall require Reliability Class I; and
 - b. The retention of inadequately treated wastewater through the use of either the existing lagoon system, a retention basin, and/or the use of berms or other appropriate measures to ensure at least a 24-hour holding capacity of the design flow of the treatment works.

In addition to the reliability provisions noted above, the draft permit contains conditions which address unauthorized discharges and associated compliance and enforcement for noncompliance with permit requirements. Specifically, Part II.O (State Law) of the draft permit, states “Nothing in this permit shall be construed to preclude the institution of any legal action under, or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any other state law or regulation or under authority preserved by Section 510 of the Clean Water Act. Except as provided in permit conditions on "bypassing" (Part II.U.), and "upset" (Part II.V.) nothing in this permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance”. In the event of an unauthorized discharge, DEQ’s water compliance and enforcement staff will work closely with the permittee. DEQ’s enforcement program acts to protect human health and the environment and to assure the integrity of the Department’s regulatory programs. DEQ uses the full range of enforcement methods available and selects the most appropriate method for each action.

Staff Comments

The draft permit was updated in response to comments received during the public hearing comment period to include additional items concerning the reliability of the treatment process. Additionally, the draft permit was updated to include monthly average and weekly average mass loadings for Total Kjeldahl Nitrogen (TKN).

Additionally, there is an outstanding issue with financial assurance that is required for privately owned sewerage systems. We expect it to be resolved prior to the April 5, 2012, State Water Control Board meeting. We will provide the Board the status and the resolution of this issue at the meeting.

We have reviewed all comments and we believe the draft permit has been prepared in accordance with all applicable regulations and agency practices. Further, we believe that the effluent limits and conditions in the permit will protect the water quality standards of the receiving stream, Lake Anna.

Public Hearing Response to Comments Document

Introduction

This document serves as the Northern Regional Office’s response to comments document for those comments received during the public comment period associated with the public hearing. A list of commenters, their method of submission, the date comment letters were received by the regional office, and staff comments on those submissions are provided on pages 3 through 4.

A summary of comments received along with responses prepared by staff are found on pages 5 through 23 within this response to comments document. Where possible, comments were summarized according to issue.

Staff reviewed all comments submitted during the public comment period. A listing of all individual commenters and the issues raised by each commenter are found on pages 24 through 41 of this response to comments document. All comments received in response to this portion of the permitting action are available upon request.

List of Commenters

<p style="text-align: center;">Comments Submitted During Public Hearing Comment Period December 23, 2011 – March 2, 2012</p>
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Commenter	Mode of Submittal	Date Received	Staff Comments
Bruce and Helen McCotter	Email	February 1, 2012	
Will and Aileen Frazee	Email	February 1, 2012	
Robert Dubé	Email	February 8, 2012	Louisa County Administrator
Karen Stewart	Email	February 8, 2012	
Mike Wernig	Email	February 8, 2012	
Bob Propst	Verbal	February 9, 2012	Comments received during public hearing
Dan Byers (Louisa County Board of Supervisors)	Verbal	February 9, 2012	Comments received during public hearing
Willie Gentry (Louisa County Board of Supervisors)	Verbal	February 9, 2012	Comments received during public hearing
Charles Grutzius	Verbal	February 9, 2012	Comments received during public hearing
Doug Smith (Lake Anna Civic Association)	Verbal	February 9, 2012	Comments received during public hearing on behalf of Lake Anna Civic Association
Duane Redic	Verbal	February 9, 2012	Comments received during public hearing
Lin Kogle	Verbal	February 9, 2012	Comments received during public hearing
Larry Zemke	Verbal	February 9, 2012	Comments received during public hearing
Wayne Jones	Verbal	February 9, 2012	Comments received during public hearing
B.J. Blount	Verbal	February 9, 2012	Comments received during public hearing
John Carroll	Verbal	February 9, 2012	Comments received during public hearing
Robert McGhee	Verbal	February 9, 2012	Comments received during public hearing
David Norem	Verbal	February 9, 2012	Comments received during public hearing
Bill Murphey	Verbal	February 9, 2012	Comments received during public hearing
Rick Meidlinger	Verbal	February 9, 2012	Comments received during public hearing
Walt Michalski	Verbal	February 9, 2012	Comments received during public hearing
Mary Radloff	Verbal	February 9, 2012	Comments received during public hearing
Christopher Owens	Verbal	February 9, 2012	Comments received during public hearing
Ray Jurgel	Verbal	February 9, 2012	Comments received during public hearing
Jim McCormack	Verbal	February 9, 2012	Comments received during public hearing

Bill McGrath (Friends of Lake Anna)	Verbal	February 9, 2012	Comments received during public hearing on behalf of Friends of Lake Anna
Frank Jenkins (Friends of Lake Anna)	Verbal	February 9, 2012	Comments received during public hearing on behalf of Friends of Lake Anna
Harry Ruth (Friends of Lake Anna)	Verbal	February 9, 2012	Comments received during public hearing on behalf of Friends of Lake Anna
Eric Donnelly	Verbal	February 9, 2012	Comments received during public hearing
Dean Rodgers (Louisa County Water Authority)	Verbal	February 9, 2012	Comments received during public hearing on behalf of LCWA
James Kogle	Verbal	February 9, 2012	Comments received during public hearing
Comments Submitted During Public Hearing Comment Period (Continued) December 23, 2011 – March 2, 2012			

Commenter	Mode of Submittal	Date Received	Staff Comments
Carol Mathieu	Verbal	February 9, 2012	Comments received during public hearing
Myrna Bass	Verbal	February 9, 2012	Comments received during public hearing
Steve Monoski	Verbal	February 9, 2012	Comments received during public hearing
Carmine and Kathy Largo	Email	February 12, 2012	
David Norem	Email	February 12, 2012	
Christine McCotter	Email	February 16, 2012	
Billy Pritchard	Email	February 18, 2012	
Dan Baker	Email	February 20, 2012	
Mark Rausch	Email	February 21, 2012	
Jim Brooksbank	Email	February 21, 2012	
Michael Ireland	Email	February 24, 2012	
William and Elizabeth Blanchard	Email	February 27, 2012	
Donna Finnegan	Email	February 28, 2012	
Linda Chaney	Email	February 28, 2012	
Louisa County Board of Supervisors	Email/Fax	March 1, 2012	
Harry Ruth (Friends of Lake Anna)	Email	March 1, 2012	Comments submitted on behalf of Friends of Lake Anna
Duane Redic	Email	March 1, 2012	
Chris Shultis	Email	March 1, 2012	
Duane Redic	Email	March 2, 2012	

Public Comment #1: Expansion to 99,000 Gallons per Day (gpd)

Comments were received concerning the need for an expansion to 99,000 gpd:

- Concern that there is no apparent statement of need

- Lake Anna Environmental Services has not demonstrated the requirement to increase their sewage discharge fivefold
- Request the State Water Control Board and Louisa County cap the discharge levels to the 2011 level of 20,000 gpd
- Why the need for 99,000 gpd when only using 2,500 gpd – 5,000 gpd
- Need more justification for the request for 99,000 gpd
- Questions need without knowing what development will ultimately consist of
- Does not want treatment plant expanded
- State Water Control Board should cap permit at 20,000 gpd until permittee shows need for 99,000 gpd
- Why allow an increase of any size
- Concerned DEQ would consider a permit request that increases five-fold the amount of effluent that could be discharged into Lake Anna over the previous permit amount
- Should not consider approving a permit to add five times more effluent into the lake without doing a full environmental impact study and after analyzing a comprehensive minimum five – ten year business growth plan for the lake
- There is no demonstrated need for a discharge permit at an increased level and approval of an expansion of a wastewater treatment plant to that size and scope at the present time and granting the expanded permit to 0.099 MGD would be against the will of the governing body and not in full consideration of protecting waters of the state
- Why the increase if only 5,000 gallons are currently used

Staff Response:

A statement of need is not required by the Virginia Pollutant Discharge Elimination System (VPDES) regulation. As explained by the permittee during the public participation process, the request for an expansion has been made in anticipation of future need due to continued growth in the area. However, there is no requirement to justify the request or to demonstrate the need for the expanded flows. An applicant may request an expansion without limitation of flow; DEQ has no authority under statute or regulation to deny the request for expansion to 0.099 MGD as long as a permit can be prepared to ensure protection of water quality.

Land use, zoning and development plans of Louisa County are not within the scope of the VPDES regulations. It should be noted that VPDES permits do not relieve the permittee of responsibility to comply with all applicable local ordinances and requirements. Staff notes that the draft permit does not supersede local government planning and zoning requirements. Specifically, 9VAC25-31-190 states that permits do not convey any property rights of any sort, or exclusive privilege.

The draft permit was prepared to protect the Virginia Water Quality Standards (9VAC25-260 et seq.) applicable to the receiving stream, Lake Anna. These are the same standards used to characterize and protect all waters of the Commonwealth. The permit as drafted will meet the applicable regulatory standards that have been established to protect and maintain the water quality of Lake Anna and its beneficial uses.

Public Comment #2: No More Sewage Effluent to Lake Anna

Comments were received stating that no more sewage effluent should be discharged to Lake Anna:

- No more effluent in to the lake
- Insist the treated wastewater be pumped to Cutalong golf course area and dispersed over land
- Concern about the impact that increased sewage waste discharge into the lake will have on the health and safety of those families who enjoy the recreational benefits of the lake
- Does not care what the quality level is of the effluent. There should not be any more discharged to lake
- Whether it's clean effluent, treated effluent, or whatever kind of effluent its effluent and it's from sewage and that's not a good thing
- Does not want plant or any more effluent into the lake
- Does not support a permit that will allow more effluent into lake than current permit allows due to uncertainty and risk
- Irrational to increase the input of contaminants without knowing where we are now
- Against any amount of discharge that could possibly hurt a fragile environment such as Lake Anna
- Regardless of whether or not the treated effluent is cleaner than the lake water we must consider what it could do to its recreational usage

- Would think common sense would prevail at State Water Control Board discussions to look out for citizens of Louisa County and not just stand on principal based upon regulations
- Lake Anna is already polluted and additional sewage discharges will make it worse
- What is the impact to the lake
- Concern about impact of increased sewage wastewater on health and safety of those who enjoy the recreational benefits of lake
- Do not consider supporting the permit to allow for an increase in effluent to be deposited into the lake
- Cannot imagine even considering such a drastic and damaging effect of increasing the levels of effluent allowed
- Strongly support your actions to ensure that the level of particulate matter in the Lake Anna effluent will capped to that existing prior to the request to increase the volume to 100,000 gpd
- Lake Anna is a closed loop system in that a very small percentage of water goes over the Lake Anna dam. Thus, whatever less-than-desirable contaminants that get into Lake Anna will mostly remain in Lake Anna.
- Government is more concerned about allowing developers to make money than with the reality that allowing effluent into Lake Anna, or any other clean body of water, contaminates that water
- Present and long-term effects of expansion of the discharge permit to accommodate 0.099 MGD have not been fully considered

Staff Response:

The draft permit was prepared to protect the Virginia Water Quality Standards (9VAC25-260 et seq.) applicable to the receiving stream, Lake Anna. These are the same standards used to characterize and protect all waters of the Commonwealth. Staff prepared the draft individual permit with an understanding of the water quality issues associated with lake ecology in general, and Lake Anna in particular. The permit as drafted will meet the applicable regulatory standards that have been established to protect and maintain the water quality of Lake Anna and its beneficial uses.

Public Comment #3: Development in the Lake Anna Plaza Area

Comments were received pertaining to the development and growth plans for the Lake Anna Plaza area:

- No well-defined and articulated plan for types of growth in the area
- One of three major growth areas in county and should have more input from owners and developers as to what this is all about to see if it fits county's long range plan
- Do not consider a permit of this magnitude without understanding the future growth of the development company or what the future growth is of Lake Anna
- Is it necessary to develop and despoil all the land there is
- Questions reluctance of the permittee to describe further plans for property
- Plans that require this expansion have not been submitted to the Board of Supervisors or the community for approval

Staff Response:

Land use and development plans of Louisa County are not within the scope of the VPDES regulations. It should be noted that VPDES permits do not relieve the permittee of responsibility to comply with all applicable local ordinances and requirements. Staff notes that the draft permit does not supersede local government planning and zoning requirements. Specifically, 9VAC25-31-190 states that permits do not convey any property rights of any sort, or exclusive privilege.

Public Comment #4: Alternative Disposal Options

Comments were received supporting the use of alternative disposal options rather than a direct discharge to Lake Anna:

- Insist that the treated wastewater be pumped to Cutalong and dispersed over land
- Pump it elsewhere or haul it
- What are the sewage processing alternatives available at Lake Anna that will still allow for growth in the area
- Other alternatives make sense
- Developer should pay for an alternative or scale down project accordingly
- Citizens know other systems are available
- Alternative systems should continue to be investigated
- Food Lion does not pollute lake and that is the kind of development we need
- If the permittee does not have land necessary to support their dream development then cut back on the dream development so you can use a portion of the land for a septic system

- Developer should pay for an alternative and/or scale down their project accordingly
- Citizens know there are other sewage treatment processes and systems available that will do the job just as efficiently and pose absolutely no threat to the clean waters of Lake Anna
- It is requested the State Water Control Board honor the applicant's statement at the public hearing and work with the Virginia Department of Health to allow the applicant to conduct the necessary engineering so he can put in a drip irrigation system at Lake Anna Plaza that would discharge the sewage effluent into the ground and not put any additional sewage effluent into Lake Anna
- Consideration of alternatives to discharge to state water have not fully been considered

Staff Response:

There is no regulatory authority for DEQ to require or dictate the final disposal option for the Lake Anna Environmental Services Sewage Treatment Plant. Staff acknowledges that there may be alternative disposal options available. However, DEQ responded to the application received from the permittee by preparing a draft permit that protects the Virginia Water Quality Standards (9VAC25-260 et seq.) applicable to the receiving stream, Lake Anna, ensuring the water quality of Lake Anna and its beneficial uses will be maintained and protected.

With regard to the potential reclamation and reuse of treated wastewater, the Virginia State Water Control Law does not require the reuse of wastewater. Section 62.1-44.2 of the State Water Control Law states in part "It is the policy of the Commonwealth of Virginia and the purpose of this law to...promote and encourage the reclamation and reuse of wastewater in a manner protective of the environment and public health." While DEQ supports the reclamation and reuse of wastewater, State Water Control Law does not give the Commonwealth of Virginia authority to mandate reclamation and reuse of wastewater.

Public Comment #5: Location of Discharge Pipe

A comment was received that the location of the facility's discharge pipe should be relocated:

- Discharge pipe should be moved to the Route 208 bridge area away from swimmers and Stillwater areas

Staff Response:

Final effluent from the Lake Anna Environmental Services Sewage Treatment Plant discharges to Lake Anna via a submerged pipe at a distance of approximately 1055 feet from the shore at an approximate depth of 55 feet. There is no proposed change in discharge location.

The draft permit was prepared to protect the Virginia Water Quality Standards (9VAC25-260 et seq.) applicable to the receiving stream, Lake Anna. These are the same standards used to characterize and protect all waters of the Commonwealth. The permit as drafted will meet the applicable regulatory standards that have been established to protect and maintain the water quality of Lake Anna and its beneficial uses.

Public Comment #6: DEQ's Inspection Frequency

Comments were received with respect to self-monitoring and reporting as well as DEQ's inspection frequency:

- DEQ's policy to inspect the sewage treatment plant once every five years is inadequate
- Request DEQ change policy regarding inspections and make such inspections at least annual and a provision for no notice or surprise inspections
- Voluntary compliance for a period of five years seems inadequate and requires a higher level of oversight
- Does not like once in five year inspection as personal vehicle is inspected more frequently than a STP – does not make sense
- Ensure public access to these large sewage disposal sites and inspections at least quarterly by both the county and state and on request by the public
- DEQ inspects once a year so how would DEQ or the public know of abuses with a check only once a year

Staff Response:

Self-monitoring and reporting is the cornerstone of the VPDES program. Staff monitors the facility's compliance in accordance with standard agency practices. Compliance assessment is made by evaluating the required monthly self monitoring reports and DEQ staff inspections.

In accordance with the VPDES Compliance Monitoring Strategy, small municipal facilities which discharge more than 0.001 MGD but less than 0.040 MGD require a technical inspection once every five years. This would be the minimum planned inspection frequency. DEQ also utilizes a risk-based protocol comprised of elements designed to identify facilities that pose the greatest potential for environmental impact. These facilities are then identified as needing increased or decreased inspection scrutiny beyond what is established in the Compliance Monitoring Strategy. The

compliance history of the facility, including the review of the permittee's monthly self monitoring results and the ability of the wastewater treatment plant to comply with permit limits and conditions, are elements considered in the risk-based approach. Therefore, the compliance inspection frequency for this facility will be based on a combination of factors from the Agency Compliance Monitoring Strategy, including the planned frequency based on the design flow of the facility as well as the compliance history of the operation.

Public Comment #7: Failure of Lake Anna Environmental Services Sewage Treatment Plant

Comments were received concerning a failure of the Lake Anna Environmental Services STP:

- Not clear that Lake Anna Environmental Services will be held liable to clean up any spills
- How will DEQ prevent mishaps
- Should lake become fouled, businesses will not only suffer, but may fail all together
- Property values will decline
- Not concerned about when plant operates correctly, but when it does not operate correctly
- Concern is the unexpected
- Spills will have a negative impact on environment and property values
- Mechanical breakdowns occur
- Not if something fails, but when

Staff Response:

The comments and concerns raised pertain to the reliability of the treatment processes, to include the mechanical processes involved in the collection, transmission and treatment of wastewater as well as the possible financial impacts resulting from a failure. The draft permit published for public notice contained provisions for the reliability of the treatment works at both the current and proposed design flows. Reliability is a measurement of the ability of a component or system to perform its designated function without failure or interruption of service. Reliability requirements are established in the Virginia Sewage Collection and Treatment Regulations at 9VAC25-790 et seq.. Specification of the reliability requirements of treatment works are included in all VPDES permits for facilities treating sewage.

The final draft permit has been modified to reflect additional reliability measures developed in coordination with the permittee and stakeholders to provide extra measures aimed to prevent or minimize the likelihood of a failure and, should a failure occur, to minimize the chances of partially or untreated sewage getting to Lake Anna. The enhanced reliability special condition is summarized below:

1. The 0.020 MGD permitted treatment works shall meet Reliability Class II.
2. Upon issuance of the CTO for the 0.099 MGD flow tier, the permitted treatment works shall meet Reliability Class I.
3. Within 180 days of the effective date of the permit, the permittee shall submit to the Northern Regional Office a plan and schedule to upgrade the two existing pump stations to Reliability Class I.
4. The permittee shall be responsible for implementing and maintaining adequate safeguards to prevent the discharge of untreated wastewater and/or partially treated wastewater that has not been treated in accordance with the requirements of this permit. The permittee shall consider the following reliability features to assure that inadequately treated wastewater is not discharged to Lake Anna:
 - a. The installation of any new pump station(s), whether at the 0.020 MGD or the 0.099 MGD flow tiers, shall require Reliability Class I; and
 - b. The retention of inadequately treated wastewater through the use of either the existing lagoon system, a retention basin, and/or the use of berms or other appropriate measures to ensure at least a 24-hour holding capacity of the design flow of the treatment works.

In addition to the reliability provisions noted above, the draft permit contains conditions which address unauthorized discharges and associated compliance and enforcement for noncompliance with permit requirements. Pursuant to 9VAC25-31-190, the permittee must comply with all conditions of the permit and shall report any noncompliance which may endanger health or the environment within twenty-four hours from the time the permittee becomes aware of the circumstance.

Part II.O (State Law) of the draft permit, states "Nothing in this permit shall be construed to preclude the institution of any legal action under, or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any other state law or regulation or under authority preserved by Section 510 of the Clean Water Act. Except as provided in permit conditions on "bypassing" (Part II.U.), and "upset" (Part II.V.) nothing in this permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance". In the event of an unauthorized discharge, DEQ's

water compliance and enforcement staff will work closely with the permittee. DEQ's enforcement program acts to protect human health and the environment and to assure the integrity of the Department's regulatory programs. DEQ uses the full range of enforcement methods available and selects the most appropriate method for each action. Staff believes that through Part II. G, Part II.H, Part II.I, and Part II.O of the draft permit, the requirement to mitigate an unauthorized discharge is inherent and that no further clarification is required within the permit.

Public Comment #8: Louisa County Board of Supervisors

Comments were presented at the public hearing directed towards those members of the Louisa County Board of Supervisors present:

- County of Louisa does not have strategic development plan to control commercial and residential development around the lake
- Board of Supervisors needs to ensure over development does not destroy quality of water within Lake Anna
- This particular sewage effluent discharge plant/permit resides in Louisa County so the Louisa Supervisors have a particular need to protect the health, safety and welfare of their residents and lake visitors
- Louisa can easily do this by passing an ordinance
- Appalled that there is no process involving the Louisa Board
- Only way to halt permit would be for Louisa County Board of Supervisors to pass ordinance prohibit effluent dumping in to lake
- Only locally elected officials can change this entirely
- Louisa County Board of Supervisors zoned property as high development so there is knowledge of the development plans for the area
- Can Board of Supervisors come up with any requirements that would preclude a developer from going directly to DEQ to get a permit
- Board of Supervisors needs to look at what happens if plant fails consider passing ordinances that restrict further development of facilities to dump effluent in to lake
- Listen, step back and look at the big picture
- This is a county issue and if we do not have a county what good are the individual districts
- Work to get it together
- Board of Supervisors should include in an ordinance the following items: 1) No additional sewage effluent to be discharged into Lake Anna, 2) Require a statement of need, 3) Require posting of a bond in the amount to be determined by Louisa County, and 4) Require the permittee to notify Louisa County of all DEQ and Virginia Department of Health (VDH) sewage treatment violations that occur within the facility or collection system or discharge points

Staff Response:

Land use, zoning and development plans of Louisa County are not within the scope of the VPDES regulations. It should be noted that VPDES permits do not relieve the permittee of responsibility to comply with all applicable local ordinances and requirements. Staff notes that the draft permit does not supersede local government planning and zoning requirements. Specifically, 9VAC25-31-190 states that permits do not convey any property rights of any sort, or exclusive privilege.

Public Comment #9: Denial of Permit

Comments were received requesting DEQ and the State Water Control Board deny the reissuance of the draft permit:

- Do not reissue permit
- Protest against issuance of such a permit
- Against the permit for Lake Anna Environmental Services to discharge the additional 79,000 gallons of effluent into Lake Anna
- Strongly object to the issuance of this specific permit as well as discharging of any sewage effluent
- State Water Control Board should deny issuance
- Deny and let permittee sue
- When the sewage treatment process relies on self-compliance and self-reporting and the applicant lies in a public hearing and the facility is only inspected once each five years, we request that this permit be denied or at a minimum not receive any additional allocation over the previous limit of 20,000 gpd

- Louisa County Board of Supervisors voted to formally oppose reissuance of the permit at the present requested level of 0.099 MGD
- Deny unneeded increase

Staff Response:

A statement of need is not required by the Virginia Pollutant Discharge Elimination System (VPDES) regulation. As explained by the permittee during the public participation process, the request for an expansion has been made in anticipation of future need due to continued growth in the area. However, there is no requirement to justify the request or to demonstrate the need for the expanded flows. An applicant may request an expansion without limitation of flow; DEQ has no authority under statute or regulation to deny the request for expansion to 0.099 MGD as long as a permit can be prepared to ensure protection of water quality.

The draft permit was prepared to protect the Virginia Water Quality Standards (9VAC25-260 et seq.) applicable to the receiving stream, Lake Anna. These are the same standards used to characterize and protect all waters of the Commonwealth. The permit as drafted will meet the applicable regulatory standards that have been established to protect and maintain the water quality of Lake Anna and its beneficial uses.

Public Comment #10: Effluent of Drinking Water Quality

Comments were received that the discharge from the Lake Anna Environmental Services STP should be of drinking water quality:

- Permit should reflect that any sewage effluent should be processed to the level for discharging into a public water supply
- There is no reason why the water cannot be made of drinkable quality before it is put in the lake
- As a fundamental policy, if you cannot drink it do not put it in the lake
- DEQ should require drinkability of effluent and if DEQ cannot give such assurance then due to risk permit should not be granted
- DEQ and State Water Control Board should require effluent be drinkable, not just low bacteria
- Concern about drinking water at lake
- Louisa County is requesting a water withdrawal from Lake Anna for public use so the permit should reflect that any sewage effluent should be processed to the level for discharging into a public water supply
- The Louisa County Water Authority has an application pending for water withdrawal for public use from Lake Anna. The effect of this increase in permitted effluent has not been considered in light of this permit application.

Staff Response:

The Water Quality Standards include provisions for facilities that discharge to waters designated as Public Water Supplies. Although Louisa County has applied for a Virginia Water Protection Permit (VWPP) for a water withdrawal from Lake Anna, the permit has not been issued and Lake Anna has not been designated as a Public Water Supply in the Water Quality Standards. Furthermore, drinking water standards are not applicable to this discharge since this is a wastewater treatment facility and not a potable water treatment plant producing drinking water.

The draft permit was prepared to protect the Virginia Water Quality Standards (9VAC25-260 et seq.) applicable to the receiving stream, Lake Anna. These are the same standards used to characterize and protect all waters of the Commonwealth. The permit as drafted will meet the applicable regulatory standards that have been established to protect and maintain the water quality of Lake Anna and its beneficial uses.

Public Comment #11: Reliability

Comments were received concerning the reliability class of new additions to the existing sewage treatment plant as well as with the expansion to 0.099 MGD

- Request that the permit be modified to include wording that requires Class I reliability for any future pumping stations that may be added to the existing system
- Require reserve storage sufficient enough to continue operations without pump and haul for a specific minimum time period
- Request that the new plant be constructed with a berm or bio-retention area sufficient to ensure that any spillage or accidental upset occurring on the property be confined to the property
- Request dual redundancy be installed with all electrical and critical components at both the sewage processing plant and any collection facilities to minimize mechanical or electrical failures

Staff Response:

The comments and concerns raised pertain to the reliability of the treatment processes, to include the mechanical processes involved in the collection, transmission and treatment of wastewater as well as the possible financial impacts resulting from a failure. The draft permit published for public notice contained provisions for the reliability of the treatment works at both the current and proposed design flows. Reliability is a measurement of the ability of a component or system to perform its designated function without failure or interruption of service. Reliability requirements are established in the Virginia Sewage Collection and Treatment Regulations at 9VAC25-790 et seq.. Specification of the reliability requirements of treatment works are included in all VPDES permits for facilities treating sewage. The final draft permit has been modified to reflect additional reliability measures developed in coordination with the permittee and stakeholders to provide extra measures aimed to prevent or minimize the likelihood of a failure and, should a failure occur, to minimize the chances of partially or untreated sewage getting to Lake Anna. The enhanced reliability special condition is summarized below:

1. The 0.020 MGD permitted treatment works shall meet Reliability Class II.
2. Upon issuance of the CTO for the 0.099 MGD flow tier, the permitted treatment works shall meet Reliability Class I.
3. Within 180 days of the effective date of the permit, the permittee shall submit to the Northern Regional Office a plan and schedule to upgrade the two existing pump stations to Reliability Class I.
4. The permittee shall be responsible for implementing and maintaining adequate safeguards to prevent the discharge of untreated wastewater and/or partially treated wastewater that has not been treated in accordance with the requirements of this permit. The permittee shall consider the following reliability features to assure that inadequately treated wastewater is not discharged to Lake Anna:
 - a. The installation of any new pump station(s), whether at the 0.020 MGD or the 0.099 MGD flow tiers, shall require Reliability Class I; and
 - b. The retention of inadequately treated wastewater through the use of either the existing lagoon system, a retention basin, and/or the use of berms or other appropriate measures to ensure at least a 24-hour holding capacity of the design flow of the treatment works.

Public Comment #12: Support Reissuance of Permit

Comments were received supporting the reissuance of the permit:

- Requests renewal and increase in permit design flow
- Asks DEQ to recommend permit and SWCB to approve
- Board of Supervisors is supportive of reissuance of the permit at the former level of 0.020 MGD only

Staff Response:

- There are no issues for staff to address in these comments.

Public Comment #13: Microconstituents

Comments were received concerning the presence of pharmaceuticals in the wastewater and the additional impact of these microconstituents with the proposed expansion to 0.099 MGD

- Concern about five year permit and lack of science to measure certain pollutants that may or may not be out there
- Stipulate in permit that as science and technology becomes available, implement those measures so do not have to wait for five years
- No available technology to remove drugs, hormones, soluble organic material from effluent yet we're going to propose 99,000 gpd to lake

Staff Response:

The draft permit was prepared to protect the Virginia Water Quality Standards (9VAC25-260 et seq.) applicable to the receiving stream, Lake Anna. These are the same standards used to characterize and protect all waters of the Commonwealth. The permit as drafted will meet the applicable regulatory standards that have been established to protect the water quality of Lake Anna and its beneficial uses. Effluent in conformance with its permit will have no measureable impact on water quality. .

The presence of pharmaceuticals in treated effluent is an emerging issue. Studies have shown that our nation's waters contain a broad range of chemicals and compounds that can cause environmental harm. As analytical test procedures continue to measure compounds in smaller and smaller concentrations, additional compounds are being identified in our waters. These products include both human and veterinary drugs, antibiotics, fragrances and cosmetics, soaps, fire retardants, pesticides and plasticizers (compounds which are used in a wide array of plastic products ranging from plastic

bottles and eye glasses to sport safety equipment). Most all of the products and compounds that have been developed and used by people will break down into their basic constituents (parts) and end up in the air, water or soil at some point. The term microconstituent is now being used to describe natural or manmade compounds that are detected in the environment with a potential effect on organism development and human health.

DEQ is keeping informed of the latest developments in the field and is consulting with EPA on this issue. EPA is the lead federal agency on development of a national plan to identify human and environmental health effects from endocrine disrupting compounds and other microconstituents. EPA plans to work with environmental organizations, public utilities (drinking water and sanitary), state health and environmental agencies, and the agricultural community in the development of this national plan. EPA has identified four focus areas for the future: strengthening science, improving public communication about risks, building collaborative partnerships with pharmaceutical companies, and considering regulatory tools to address the issues. Until there is more information about the impact of these microconstituents to human health and the environment there is no basis for additional requirements in VPDES permits. As this program develops over the years DEQ will continue to look at our requirements to improve the protection of the environment.

Public Comment #14: Public Notification of Plant Operation

Comments were received concerning the dissemination of operational information to the public as it pertains to plant performance

- Have mechanism in place so there's clear communication in terms of how plant is operating

Staff Response:

DEQ does not have the regulatory authority to require the permittee to provide records of monitoring, operation, and maintenance to the public. However, pursuant to the Freedom of Information Act (FOIA) all records submitted to DEQ by the permittee are available to the public upon request.

Additionally, it is not standard practice for DEQ to notify localities or the public of permit violations. However, if there were an event which could significantly impact human health, DEQ would consult with the Virginia Department of Health and local officials as necessary.

Public Comment #15: Ineffectiveness of DEQ and the Public Process

Comments were received concerning the ineffectiveness of DEQ with respect to protecting the environment and the ineffectiveness of the public process

- Participation and attendance is meaningless and a lot of lip service to look good to have a meeting
- Concern with process and the fact there is very little environmental quality being controlled on the citizen's behalf by DEQ
- DEQ simply rubber stamps permits tied to regulations
- Should have title Department of Regulation Administration as not fitting to suggest concerned about environmental quality in terms of minimizing risk to lake
- Should be a system for residents and property owners to have input and impact in decision making process
- We the people should be given a greater say
- Concerns that much of the worthy input from caring citizens, lake organizations, and home owner associations will eventually be nothing more than lip service to a hearing process that will not manifest itself in way that we will be able to act in the more responsible manner in order to keep our lake clean, safe and viable and protect property values
- Process is procedural and process compliant in nature and does not lend itself to moral, environmental quality-based decision making
- Does not appear to be the proper authority to facilitate or enact on many of the issues and recommendations we are trying to raise as paramount to the process
- Business as usual and a rubber stamp for applicants if procedures and guidelines have been met
- The title Department of Environmental Quality implies you are empowered to monitor our lands and waters and hopefully manage and protect them as well
- Alas, it appears you only grant permits, so it is up to the community to become the stewards of the lake protecting and conserving its beauty
- What authority or power if any does DEQ have to enact on many of the suggestions and recommendations that have been submitted as part of the hearing process

- What authority does DEQ have to take your “Environmental Quality” tag seriously and to ensure that decisions made will establish a permit that will preserve and enhance the environmental quality of the lake
- The public and its natural resources are not being effectively served
- Aside from the obvious permitting approval based on guidelines what authority or power if any does DEQ have to enact on many of the suggestions and recommendations that have been submitted as part of this hearing process
- If our concerns about the ineffectiveness and inadequacy of the existing process have any validity what proactive measures is DEQ (or others) taking that will ensure our concerns are being addressed as well as enable DEQ to effectively do the job we expect them to
- If you do not have any authority to make a moral and value assessment regarding permitting requests and the like, then this whole hearing process has been a huge waste of time for everybody and has just served to be a big public relations event to give the impression that you are proactive with community affairs when in fact it is business as usual and nothing is done to protect the lake
- If you are unable to provide meaningful answers to these questions please pass them on to the person or persons who can
- This process is not just a one way street where we just talk...you listen...and send us a standard we got your comments response
- We need to understand once and for all what authority DEQ has (beyond procedural) to truly protect the lake and our environment

Staff Response:

The VPDES permitting program is well established and has demonstrated its effectiveness in protecting water quality throughout the Commonwealth. Staff prepared the draft individual permit with an understanding of the water quality issues associated with lake ecology in general, and Lake Anna in particular. The permit as drafted will protect and maintain the water quality of Lake Anna and its beneficial uses. The existing permit limits, which are protective of water quality as demonstrated by lake water quality monitoring data, are carried forward with the draft permit at the current design flow. Effluent limits associated with the expanded flow tier cap total nitrogen (TN) and total phosphorus (TP) discharges at their current levels, in accordance with applicable requirements under the Chesapeake Bay program. These nutrient caps established to protect the far-field Chesapeake Bay also help to ensure local water quality is protected because of the very high level of treatment provided with TN and TP annual concentration limits of 3.8 mg/L and 0.5 mg/L, respectively.

The draft permit was prepared in accordance with all applicable regulations and agency practices. This includes the requirements for notification of affected localities and the process for public participation. Although staff understands the concerns raised by the commenters, and acknowledges the concerns associated with the discharge of treated wastewater, the draft permit will protect the water quality and the beneficial uses of Lake Anna.

Public Comment #16: Nutrients

Comments were received with respect to added nutrient and bacteria contributions to the lake from the proposed expanded discharge:

- Drugs, hormones, and soluble organic material from effluent are nutrients for bacteria and none of us can pretend that there are no bacteria already in water
- If you put nutrients in the water on which bacteria can grow they will grow
- If your highest effluent discharge is in the warm months they will grow even better at the time your children and mine are swimming
- Wells are already contaminated by bacteria from lake water so what happens when you have more effluent and more materials for bacteria to grow

Staff Response:

The draft permit ensures the water quality of Lake Anna is maintained and protected. The existing permit limits, which are protective of water quality, are carried forward with the draft permit at the current design flow. Lake monitoring data in the vicinity of the discharge, and downstream of the discharge show bacteria and nutrient levels fully supporting the aquatic life and recreational beneficial uses.

Effluent limits associated with the expanded flow tier cap total nitrogen (TN) and total phosphorus (TP) discharges at their current levels, in accordance with applicable requirements under the Chesapeake Bay program. These nutrient caps established to protect the far-field Chesapeake Bay also help to ensure local water quality is protected because of the very high level of treatment provided with TN and TP annual concentration limits of 3.8 mg/L and 0.5 mg/L, respectively.

Public Comment #17: Waste Heat Treatment Facility

Comments were received concerning the regulatory status and monitoring of the Waste Heat Treatment Facility (WHTF) which is also known as the warm/hot side of Lake Anna:

- State Water Control Board should promulgate new rules to monitor the warm side
- Does not know why both sides cannot be watched
- Subject Lake Anna warm side to at least some DEQ regulations
- Concern about Dominion's apathy about the dangers of high temperatures on the proliferation of *E. coli*
- Should this not be the responsibility of Dominion and DEQ to monitor the hot side

Staff Response:

Dominion currently monitors temperature at three locations within the Waste Heat Treatment Facility (WHTF). Fixed continuous recorders are used at each location to record hourly temperatures in degrees Celsius. In addition, Dominion has installed a continuous temperature monitor at the end of the discharge canal to the WHTF. Real time temperature data for the discharge canal is accessible via the Dominion website.

The construction of the lake and the WHTF occurred before the existing Clean Water Act and subsequent federal and state regulations. It is clear that the state, through the State Water Control Board (SWCB) and State Corporation Commission (SCC), intended for the WHTF to serve as cooling lagoons. Under the VPDES regulation, the definition of surface waters excludes water bodies that are used as waste treatment systems. The SWCB and DEQ have interpreted, and the Virginia Attorney General has opined that the WHTF is a waste treatment system. This interpretation was upheld by the Virginia Supreme Court in their January 13, 2012, ruling. Accordingly, DEQ does not conduct water quality monitoring on the WHTF.

However, the Lake Anna Civic Association (LACA) does collect data to characterize conditions on the WHTF. These data are available to the public through the civic association.

Public Comment #18: Integrate State Water Control Board, DEQ and County Approval Activities

Comments were received on the coordination of permitting actions with adjacent counties

- Louisa County Board of Supervisors is concerned at their lack of authority in applications such as this
- Integrate State Water Control Board, DEQ, and county approval activities
- Hearing demonstrated need for timely state and county coordination to support development of Lake Anna
- Is not clear if Spotsylvania and Orange Counties were involved

Staff Response:

Section 62.1-44.15:4 of the Code of Virginia requires DEQ to notify each locality and riparian property owner to a distance one half mile downstream on non-tidal waters when a permit application is received for the issuance of a new or modified permit or a permit reissuance where an expansion is planned.

By letter dated April 27, 2011, DEQ notified the Louisa County and Spotsylvania County Administrators and the Louisa County and Spotsylvania County Board of Supervisors of the proposed expansion associated with the reissuance.

Riparian property owners identified one half mile upstream and one half mile downstream of the discharge location on both the Louisa County and Spotsylvania County shores of Lake Anna were also notified of the proposed expansion by letter dated April 27, 2011.

DEQ staff has taken additional measures not required by regulation. Prior to the public notice of the draft VPDES permit, DEQ hosted two meetings on September 9, 2011, at the Salem Church Branch of the Central Rappahannock Regional Library. The first was held with the Lake Anna Civic Association (LACA), representatives from Lake Anna Environmental Services (LAES) and DEQ. The second was held with the Friends of Lake Anna (FOLA), representatives from LAES, the Chairman of the Louisa County Board of Supervisors, and DEQ. Both meetings allowed representatives from the two local organizations equal opportunity to discuss their comments and concerns, and to ask questions of DEQ and the permittee. DEQ also attended the October 3, 2011, meeting of the Louisa County Board of Supervisors to provide information on the draft permit and respond to questions and concerns of the Board members. In response to this permit action, DEQ has also attended meetings on November 9, 2011, and November 30, 2011, with LACA, FOLA, and members of the Louisa County Board of Supervisors to discuss the VPDES process, wastewater treatment concerns in general, and to plan for a public education forum on wastewater treatment options for the Lake Anna growth area. Land use, zoning and development plans of Louisa County are not within the scope of the VPDES regulations. It should be noted that VPDES permits do not relieve the permittee of responsibility to comply with all applicable local ordinances and requirements. Staff notes that the draft permit does not supersede local government planning and zoning

requirements. Specifically, 9VAC25-31-190 states that permits do not convey any property rights of any sort, or exclusive privilege.

Public Comment #19: Permit Dominion Resources

Comments were received concerning the Lake Anna Environmental Services STP discharge pipe crossing Dominion property:

- No permit should be issued until Dominion Resources, owner of the land adjacent to Lake Anna Environmental Services Sewer plant, grants a permit that is available for public view for any sewage discharge pipes to cross their land that permits sewage discharge of any type to enter Lake Anna
- The state should not issue permits that cross other properties not owned by the permittee without having written explicit approval since that party will also become liable if there are any problems

Staff Response:

9VAC25-31-10 defines owner as “....any public or private institution, corporation, association, firm or company organized or existing under the laws of this or any other state or country, or any officer or agency of the United States, or any person or group of persons acting individually or as a group that owns, operates, charters, rents, or otherwise exercises control over or is responsible for any actual or potential discharge of sewage, industrial wastes, or other wastes to state waters, or any facility or operation that has the capability to alter the physical, chemical, or biological properties of state waters in contravention of § 62.1-44.5 of the Code of Virginia”. Dominion Resources does not own or operate the Lake Anna Environmental Services STP and has no control or responsibility for the discharge. Additionally, the VPDES permit does not convey any property rights or privileges. The issue of the discharge line crossing over, under, or through Dominion property is a matter between the permittee and Dominion to resolve.

Public Comment #20: Public Notice of Public Hearing

Comments were received concerning the DEQ website reflecting the wrong date for the public hearing and the public notice of an inclement weather date for the public hearing:

- DEQ website had the wrong date of February 16 in lieu of February 9 for the public hearing until January 26
- What are the legal ramifications of DEQ having two different dates advertised for the same public hearing

Staff Response:

In accordance with 9VAC25-31-290, a public notice of the public hearing was published in both *The Free Lance Star* and *The Central Virginian* on December 22, 2011, and December 29, 2011. The publication listed the correct date of the public hearing as February 9, 2012, with an inclement weather date of February 16, 2012. This same public notice was provided by letter dated December 21, 2011, to all persons who provided comments on the draft permit, adjoining landowners, and the Board of Supervisors and County Administrators of Louisa and Spotsylvania counties. The public notice specifically states that “In the event Louisa County Public Schools are closed on February 9, 2012, the hearing will be held on February 16, 2012 from 7:00 p.m. to 9:00 p.m.”.

The newspaper publications and letters satisfy the regulatory requirements for public notice. Staff recognizes that the DEQ website listed an incorrect date for the Lake Anna Environmental Services STP public hearing. Information on the website was corrected within twenty-four hours of notification of the error.

Approximately 130 people attended the public hearing and as such staff does not believe the error with the inclusion of an inclement weather date negatively impacted the public hearing process.

Public Comment #21: Public Notice and Staff Recommendation for Permit Approval

- DEQ staff in the public notice recommended approval of this permit before a public hearing
- Request State Water Control Board instruct DEQ staff to not make any recommendations for or against any permit until after a public hearing is held
- Otherwise why hold a public hearing
- Public’s concerns should be weighed heavily and a major consideration before any recommendation is made by DEQ staff for any permit or the democratic process of our country is not being followed

Staff Response:

In accordance with 9VAC25-31-260, once an application is complete the board shall tentatively decide whether to prepare a draft permit or to deny the application. A draft permit was prepared for the Lake Anna Environmental Services STP and as such, a tentative agency decision as to the issuance of the permit was made at the time of the complete application.

Additionally, 9VAC25-31-290 requires that all public notices issued under this part contain certain minimum information to include any additional information considered necessary or proper. The inclusion of DEQ's preliminary decision to recommend issuance of the permit is both necessary and proper as it conveys the agency's position to the public on the draft permitting action at the time of the public notice for the public hearing. The preliminary recommendation by DEQ staff does not circumvent the public process, nor does it bind or restrict the final decision of the State Water Control Board in deciding how to move forward with this permitting action.

Public Comment #22: Permittee Ethics

Comments were received questioning the ethics of the permittee:

- The applicant said at the public hearing that all sixteen of their previous violations were administrative in nature. The data previously forwarded indicated Lake Anna Environmental Services exceeded and discharged into Lake Anna Sewage Effluent their Total Suspended Solids Concentration in May 2005 by 50% and again in January 2006 by over 25%. In addition, they exceeded Ammonia Concentration in January 2006 by over 100%, and again in September 2006 by 50%, also in March 2007 by almost 200%. Again in June 2011, a report indicates that the sewage effluent discharged had a concentration of Max – CL2 Inst. Res. Max (chlorine) which exceeded the permit limit by over 1,000% when the permit Limit was 0.010mg/L and LAES discharged 0.125mg/L. All of these discharges exceeded the permit limits and put the public that swim and recreate in the immediate area of the discharge at risk.
- In addition, the applicant in March 2011 received a permit violation for failing to monitor the lagoon liner (which retains all of the sewage in ponds above the lake). The permit indicated the liner was to be checked a minimum of 2 times a year.
- Concern is if the applicant does not tell the truth in a public hearing then when can DEQ, SWCB and public believe him.

Staff Response:

The facility has received sixteen warning letters (ten of which were received under the previous ownership) between September 2000 and October 12, 2011, for both effluent limit violations and administrative items. Given that the worst-case, critical conditions underlying development of permit limits rarely occurs, an exceedance of a permit effluent limit does not necessarily translate into an exceedance of the water quality standards. There is no evidence that the effluent limit violations noted below resulted in a water quality issue with Lake Anna.

Staff will not comment on personal opinions or views.

Public Comment #23: National Pollutant Discharge Elimination System (NPDES)

Comments were received concerning NPDES regulations pertaining to plant capacity and the volume of sewage effluent:

- NPDES regulations require that permits be approved for no more plant capacity and volume of sewage effluent than can reasonably be expected in a reasonable time
- Neither the applicant or DEQ can state with the degree of certainty required by the NPDES program either the volume of the composition of the sewage effluent to be generated or when it will be generated
- Application is premature at best

Staff Response:

Staff is not aware of the reference to the National Pollutant Discharge Elimination System (NPDES) regulations which speak to restrictions on the volume of flow that an applicant may request. Without further detail on the regulatory citation, staff cannot specifically address this comment as it pertains to the federal regulations.

Virginia has been delegated authority to administer the NPDES program and has developed the state Virginia Pollutant Discharge Elimination System (VPDES) regulations, 9VAC25-260-10 et seq., to implement the program. A statement of need is not required by the VPDES regulation. As explained by the permittee during the public participation process, the request for an expansion has been made in anticipation of future need due to continued growth in the area. However, there is no requirement to justify the request or to demonstrate the need for the expanded flows. An applicant may request an expansion without limitation of flow; DEQ has no authority under statute or regulation to deny the request for expansion to 0.099 MGD as long as a permit can be prepared to ensure protection of water quality. The draft permit was prepared in response to the application received and ensures that the Virginia Water Quality Standards (9VAC25-260 et seq.) applicable to the receiving stream, Lake Anna, are maintained and protected.

Public Comment #24: National Pollutant Discharge Elimination System (NPDES) and Request for Environmental Impact Study

Comments were received concerning DEQ's issuing a Finding of No Significant Impact and the request for an environmental impact study:

- We request compliance with the National Pollutant Discharge Elimination System (NPDES) laws and an Environmental Impact Study be conducted that will provide a scientific and technical review that this application warrants due to the potential risks to Lake Anna and the Chesapeake Bay watershed
- DEQ erred in issuing a Finding of No Significant Impact (FONSI) ruling in connection with this application thereby relieving the applicant of responsibility for a full Environmental Impact Study
- The FONSI ruling appears to reflect a conclusion that this application is for a simple upgrade of an existing plant
- A FONSI ruling under these circumstances finding, based essentially on a very limited paper review, appears irresponsible
- It is requested this FONSI ruling be changed and an Environmental Impact Study be performed before this permit continues to be processed
- Record of review for this permit application reveals no consideration of its potential impact on the Chesapeake Bay watershed, either in terms of long term effects or the risk of catastrophic release due to human error or mechanical failure, or "acts of God" such as a violent storm or earthquake that recently struck Louis County
- The DEQ decision to issue a FONSI ruling has eliminated any chance of the careful study needed to assess whether this plant is consistent with the Governor's commitment to the Bay and the need to protect, and hopefully improve, Lake Anna water quality
- Request a full Environmental Impact Study be performed before this permit proceeds to the SWCB

Staff Response:

The National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. 4321 *et seq.*, as implemented by the Council on Environmental Quality (CEQ) Regulations (40 CFR Parts 1500 through 1508) requires that Federal agencies include in their decision-making processes appropriate and careful consideration of all environmental effects of proposed actions, analyze potential environmental effects of proposed actions and their alternatives for public understanding and scrutiny, avoid or minimize adverse effects of proposed actions, and restore and enhance environmental quality to the extent practicable. This includes, but is not limited to, a Finding of No Significant Impact (40 CFR Part 6.206) and Environmental Impact Statements (40 CFR Part 6.207).

State permitting actions conducted in accordance with a federally delegated program, in and of themselves are not subject to the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. 4321 *et seq.*, as implemented by the Council on Environmental Quality (CEQ) Regulations (40 CFR Parts 1500 through 1508). Therefore, DEQ was not required to issue a Finding of No Significant Impact (FONSI) pursuant to NEPA and did not issue one in connection with this application. The draft permit was prepared to protect and maintain the Virginia Water Quality Standards (9VAC25-260 *et seq.*), and as such it has been determined that the effluent will have no significant impact to the receiving stream, Lake Anna.

Public Comment #25: Discharge Pipe Integrity

Comments were received concerning the integrity of the Lake Anna Environmental Services STP discharge pipe:

- Who and how often is the complete discharge pipe inspected to insure that its complete integrity is not compromised that causes sewage to leach into the surrounding ground and /or the shallow water public swimming areas of the lake before it reaches its ultimate approved discharge location

Staff Response:

Personnel utilized for the latest visual inspection conducted on July 19, 2011, are certified by the Professional Association of Diving Instructors (PADI) and hold numerous PADI specialty ratings including, but not limited to, underwater digital photography. A report of the referenced visual inspection was submitted to the facility's licensed professional engineer for review. The report included both visual observations and video from the lake shore to the termination of the discharge pipe. The report was then submitted to DEQ by the facility's licensed professional engineer.

The Discharge Pipe Integrity and Inspection Plan approved by DEQ on April 9, 2007, includes underwater visual inspections of the entire discharge pipe within the first and fourth year of the permit reissuance date. The draft permit requires the facility to revise the Discharge Pipe Integrity and Inspection Plan to include a new and more stringent requirement for annual visual underwater inspections of the discharge pipe.

The following comments are presented in the order in which they were received.

Will and Aileen Frazee

Comments Provided via Email

- Do not want to see any effluent put into lake
- Already have concerns about water temperature and bacteria that may be growing as a result of these high temperatures
- Do not add effluent to concerns

Bruce and Helen McCotter

Comments Provided via Email

- Please do not allow this
- Insist the treated wastewater be pumped to the Cutalong golf course and dispersed over land

Robert Dubé, Louisa County Administrator

Comments provided via Email

- Louisa County Board of Supervisors is asking that it is made clear during opening remarks at the upcoming public hearing that this is entirely a matter between DEQ and the applicant
- The Louisa County Board of Supervisors is not involved, not required to be involved, and does not have any binding manner on this subject
- Board does have concerns about application and no apparent statement of need
- Board is also concerned at their lack of authority in applications such as this

Karen Stewart

Comments Provided via Email

- We are completely against this
- Vote no on this request

Mike Wernig

Comments Provided via Email

- They should pump elsewhere or haul it
- Has the water been tested
- Discharge pipe should be moved to the 208 bridge away from swimmers and Stillwater areas
- Why allow an increase of any size

Bob Propst, Site Supervisor – Lake Anna Environmental Services STP

Comments Provided via Public Hearing

- Lake Anna Environmental Services requested permit renewal as matter of procedure
- Request for increase at this time is convenient and cost effective
- Did not anticipate public outcry and may have changed mind if had known
- Hears question as to why an increase to 99,000 gpd when permitted at 20,000 gpd and only using 5,000 gpd
 - Current community is essentially vacationers and only use one fourth amount required because people only there one fourth of the time
 - Does not anticipate using 99,000 gpd, but at full build-out is required to have 85,000 gpd and felt adding a safety factor was a good idea
 - DEQ has to come up with numbers on which to base permit
- Options/alternatives
 - Mass drain field – never tested and no one is there to tell you your drain field failed
 - Spray irrigation – puts effluent in air and on surface where it stays, why are you comfortable with effluent being sprayed in air and on land if not comfortable with it going in the lake
 - Drip irrigation – analyzing that option but doesn't have time before permit is renewed to put engineering in place, more cost effective, doesn't put effluent in lake, if could use at Lake Anna Plaza would
- Disagrees that putting effluent in lake is bad based on water quality
- Spray irrigation requires a large parcel of land and if anyone who lives adjacent wishes to donate land let him know
- Heard a lot of misinformation on how this works and has voluntarily spoken with many
- No one can imagine how simple it is to have an administrative issue and the 16 violations caused no detriment to lake
- Upgrade will ensure plant is more reliable and more stringent regulations

- Commented on dumping of medical waste down toilets and questioned who dumps medical waste down their toilets
- Owner of company lives at Lake Anna Plaza and grandkids swim in lake
- Lake Anna Environmental Services requests renewal and increase in permit and intends on adhering to every permit regulation in document

Dan Byers, Member, Louisa County Board of Supervisors

Comments Provided via Public Hearing

- Represents Jackson District
- We as members of the Board of Supervisors represent constituents and must share and articulate views of constituents
- Concerns with using 5,000 gpd and requesting 99,000 gpd
- No well defined and articulated plan for types of growth in area and how effluent will be treated
- No more effluent in lake
- Ask that all comments that are presented are given due consideration and that when permit is issued they be required to comply
- Educational forum on March 13th at Louisa Arts and Activities Center

Willie Gentry, Member, Louisa County Board of Supervisors

Comments Provided via Public Hearing

- Represents Cuckoo District
- DEQ has tried to educate him on process
- How much input can Board of Supervisors have? Unless we have ordinances in place we have very little to say about this
- People around lake are concerned about process
- Why the need for 99,000 gpd and not 20,000 gpd when only using 2,500 – 5,000 gpd
- Concerned about bonding issue should something go wrong
- One of three major growth areas in county and should have more input from owners and developers as to what this is all about to see if fits long range plan and comp plan and don't have that in order
- More justification for 99,000 gpd
- Wish question and answer session was taped as well because it shows frustration from citizens that the State Water Control Board needs to pick up on
- State Water Control Board should compromise this and until plant shows need for more than 20,000 gpd, the State Water Control Board should say no and stick with 20,000 gpd
- No more effluent in lake

Charles Grutzius, President of Covenant Cove Property Owners Association

Comments Provided via Public Hearing and Email

- A lot of emotion about this
- Learned a lot this evening, but obligated to make comments even though some will fall on deaf ears but for benefit of State Water Control Board and Louisa County elected officials here
- Not concerned about when plant operates correctly, but when it doesn't operate correctly due to earthquake, fire, or honest mistake by operator because that's when we pay the price
- Knows other systems are available and it appears LAES has looked at them and maybe they'll look at them again
- Very concerned about DEQ and State Water Control Board possibly approving permit that goes up to 99,000 gpd when using much less than 20,000 gpd
- Would think common sense would prevail at State Water Control Board discussions that says let's look out for citizens of Louisa County and let's not just stand on principal based upon regulations we have to go by
- Whatever less than desirable contaminants get into Lake Anna will most likely remain in Lake Anna

Doug Smith, President, Lake Anna Civic Association

Comments Provided via Public Hearing

- LACA appreciates openness of process
- Request that the permit be modified to include wording that requires Class I reliability for any future pumping stations that may be added to the existing system

- Request the permit be modified to require reserve storage sufficient enough to continue operations without pump and haul for a specific minimum time period
- Request the permit be modified to provide that the new plant be constructed with a berm or bio-retention area sufficient to ensure that any spillage or accidental upset occurring on the property be confined to the property
- Written comments were also provided during hearing

Duane Redic

Comments Provided via Public Hearing

- At times during discussion felt like up the lake without a paddle
- Participation and attendance is meaningless and a lot of lip service to look good to have a meeting
- Concern is as look at process and look at DEQ and their name is environmental quality but there is very little environmental quality being controlled on our behalf
- Rubber stamp permits tied to regulations
- Should have higher title Department of Regulation Administration as not fitting to suggest concerned about environmental quality over all in terms of minimizing risk to lake
- Who in state or what process is in place to ensure Lake Anna is the most viable safe environmentally compliant entity that's good for all of us? Isn't any process in place that looks at entire lake
- Only hope is comments to the State Water Control Board that expresses concerns of the individuals
- No more effluent in to lake
- Current permit is part time so why because regulation says it's that way magnify that 20 fold or five times what current permit allows without understanding if have greater capacity at a new plant or newer technologies
- Shouldn't consider a permit process for multiplying capacity without seeing plan from provider that says here's a facility that's going to be able to process that amount
- Don't consider a permit of this magnitude without understanding what future growth of organization is or what the future growth is of Lake Anna
- Appalled no process involving Louisa Board in terms of understanding what's going on

Lin Kogle

Comments Provided via Public Hearing

- Cited definitions of "effluent" from EPA and dictionary
- Concerned about effluent being discharged in to lake and especially the request for additional effluent
- Owners and operators of system at Lake Anna have best intentions to properly manage facility, but accidents happen
- Pennsylvania Department of Environmental Protection requested info from Occupational Safety and Health Administration addressing the criticality of emergency planning as it relates to wastewater treatment. Occupational Safety and Health Administration emergency plan report ends with statement to anticipate and expect the unexpected
- Concern is the unexpected
- Concerns about negative impacts on environment and property values
- Opposed to additional effluent in Lake Anna
- Alternative systems should continue to be investigated

Larry Zemke

Comments Provided via Public Hearing

- Speak with all due respect to DEQ and applicant
- Larger issue is Lake Anna is already polluted
- DEQ has already warned not to touch or eat cat fish and to limit eating other species of fish to once or twice per month
- Lake is a giant bowl with no place for pollutants to go
- DEQ will probably approve application and once approved the STP will be allowed to dump five times the current capacity
- State Water Control Board would probably rubber stamp approval but now thinks otherwise

- Once approved STP owners who are in this for the money can amend permit to include processing sewage from other locations inside and outside of the county which may be how owners plan to offset costs of the improvements required by permit
- Only way to halt permit would be for Louisa County Board of Supervisors to pass ordinance prohibiting effluent dumping in to lake
- To members of Board of Supervisors present:
 - Lake is a huge business and tax revenue attraction and imagine that revenue disappearing
 - Local voters make their livings on or around the lake
 - DEQ cannot care about those who live and work here only about the permit. The State Water Control Board may care about those who live and work here. Only locally elected officials can change this entirely
 - Think about this the next time you flush

Wayne Jones

Comments Provided via Public Hearing

- Support other people who have spoken
- Subdivision is closer to project than others
- Doesn't care what quality level of effluent is, don't want any more discharge in lake
- What Larry said was true
- Primary issue is not with discharge itself, although opposed to it, is facilities used to bring discharge out there
- Mechanical breakdowns occur even with redundant systems
- Will ask State Water Control Board for denial or deferral
- Would like to hear more from developer of the project about some reason why alternative solutions cannot work
- Windwood Coves has 262 lot owners and have not seen one person in favor of this
- Don't give up hope
- Fight not over, just beginning

B.J. Blount

Comments Provided via Public Hearing

- Built plant
- Board of Supervisors not having say is completely untrue
- They zoned property RD and made high density area and that's why there's going to be sewer plants in area
- Can't have high density of porta potties
- RD is for recreational resort and that is why county put it that way so you did have a say and shocked do not know that
- When it goes to the amount of effluent to be discharged how do you not know that too
- Board of Supervisors approved plans that say 34 acres commercial. How many drain fields did you think you were going to put in there
- Need permit from DEQ before you go to county and submit a set of plans and that's what you need 86,000 gpd or 99,000 gpd for
- Developer not going to spend money on a plant he doesn't need
- Ask DEQ to recommend permit and State Water Control Board to approve

John Carroll

Comments Provided via Public Hearing

- Misinformation, fear mongering, and a lot of hints of things that may or may not be going on that simply are not true
- In 1990s running as campground and county came to owner saying this is the face of Lake Anna and encouraged him to build higher density development and put in sewer plant
- In 2000s Carroll bought plant and upgraded
- Holding ponds good idea as only way to discharge is for operator to unlock and run system
- Operators do go to jail for malfeasance
- Can't spend money and then see if you can get a permit from DEQ
- Impairments aren't due to sewage treatment plants but due to mercury from coal fired power plants

- People that run plants are educated operators and engineers, so should the Board of Supervisors be sent to school so they can run or should DEQ and the State Water Control Board be allowed
- Not a gravity system and can't fail as need operators present to start system

Robert McGhee

Comments Provided via Public Hearing

- Lives about one quarter mile from plant
- Doesn't want plant or anymore effluent in to lake
- DEQ doesn't care about what we think or what citizens want and only care about technical aspects so why do we need a public hearing
- Most of us don't know technical aspects of running a STP so we wouldn't have those questions
- Board of Supervisors isn't involved in process although Mr. Blount said they were and they didn't seem to know it
- Not against development on the lake
- Food Lion doesn't pollute lake and that's the kind of development we need rather than pouring more effluent, whether it's clean effluent, treated effluent, or whatever kind of effluent it's effluent and it's from sewage and that's not a good thing

David Norem

Comments Provided via Public Hearing and Email

- Lived on lake for over 20 years
- What is the requirement? What is it that we are trying to do? Hard to evaluate what impact is without knowing what that requirement is over and above 20,000 gpd as number doesn't mean anything to me. As citizen, want to know what impact is on lake itself.
- If the STP was on the warm side DEQ wouldn't be evaluating any effluent going there and that's a criteria that someone could use to put a STP on the warm side and it wouldn't be in DEQ's purview
- Subject Lake Anna warm side, Waste Heat Treatment Facility to at least some DEQ regulations
- Issue of involvement of county in planning part and monitoring part
- What's happening on street and what are the indicators? Applaud Dominion for putting temperature on web so people can understand and there is an awareness
- How well is system running is something that I'd like to see as a way of conveying our concerns in a specific way to county and planning people in county
- Voluntary compliance for a period of five years seems inadequate and requires a higher level of oversight
- Integrate State Water Control Board, DEQ, and county approval activities

Bill Murphey

Comments Provided via Public Hearing

- As fundamental policy, all human controlled sources of pollution to Lake Anna should obey that if you can't drink it don't put it in the lake
- Conversely if you can drink it have no problem putting it in lake
- If effluent isn't drinkable then it's wrong to let children swimming in lake drink the effluent
- Questions statement that effluent is cleaner than lake water but understands only criteria on cleanliness is bacteria. Doesn't take in to account soluble or insoluble materials and that's where difference between clean effluent and drinkability occurs
- Part of criteria should address drinkability and not simply whether bacteria count is low
- DEQ should require this and if they can't give such assurance then due to direct risk to children this discharge permit should not be granted
- Problem is amount of discharge was less, now restaurants and business, more swimmers, so risk is larger than it's been in the past
- DEQ and State Water Control Board should require effluent be drinkable not just low bacteria
- Drinkable water and higher "allowability" mentioned by Doug Smith should be required at all future plants
- This is precedence for what we can expect to come in the future and DEQ and State Water Control Board need to take this in to account

- This is the same scenario that occurred in Occoquan watershed with a large number of small plants that the county had to take over and build larger plant
- Rather than go that way let's get plants to higher criteria now
- DEQ and State Water Control Board should require that if you can't drink it don't put it in the lake

Rick Meidlinger

Comments Provided via Public Hearing

- Trust but verify
- Have no doubt the operators of STP would be operating in best interests as they're not in business to be polluting the lake
- Concerned about five year permit and current lack of science to measure certain pollutants (microconstituents) that may or may not be out there
- Can we stipulate in permit that as science and technology becomes available that we measure and verify and then have some set of standards through feds (EPA level) or state that those measures take place within five years
- If not incorporated, science may catch up in two years but if it's not incorporated in regulations we won't get to it for another five years
- Concerned about notification to county
- In a partnership whether required or part of doing business it goes back to trust but verify
- Have mechanism in place so there's clear communication in terms of how that plant is operating and are we keeping up to the standards set by the State Water Control Board

Walt Michalski

Comments Provided via Public Hearing

- Concerned that we have three key offices State Water Control Board, DEQ, Board of Supervisors, but lacking interest from Spotsylvania and Orange
- Other two counties should be as interested as Louisa
- If Louisa leads effort to come up with regs for any future treatment plant developer to ask them first before going to DEQ if they can build a plant to discharge to lake, would that be legal
- Could counties preclude a citizen from coming directly to DEQ with a request for a STP in an area where a Board of Supervisors is supposed to have responsibility
- DEQ has said it's up to Board of Supervisors to come up with requirements, but can Board of Supervisors come up with any requirements again that would preclude a developer from going directly to DEQ
- We don't want treatment plant to be expanded
- Hopes Board of Supervisors takes this in to consideration and will rule against it or at least tell them to back off until they come up with real requirements to increase to 99,000 gpd
- Know plenty of controls in place that would preclude an operator from negligence or simple mistake of dumping raw effluent to lake, but that will not help property values
- Word gets out that lake is polluted then we have a real problem

Mary Radloff

Comments Provided via Public Hearing

- From farming community on lake
- Family members farming area since 1811 and have had to put money where mouth is when it comes to having clean water for Lake Anna
 - Have taken cattle off land so not on lake
 - Installed expensive treatment for manure
- Are not wealthy developers yet they have had to put a lot of money in to making sure your water is clean
- No available technology to remove drugs, hormones, soluble organic material from effluent yet we're going to propose 99,000 gpd to water
- Aside from effects to humans and animals from these materials they are nutrients for bacteria and none of us can pretend that there are no bacteria already in water
- If you put nutrients in the water on which bacteria can grow they will grow
- If your highest effluent discharge is in the warm months they will grow even better at the time your children and mine are swimming

- If not practical to put in very highest level of treatment (drinking quality water) because your property won't support that kind of treatment then we need to look at what is allowed on that piece of property
- If it can't support treatment of absolute highest level then that development should be limited
- Process involves more than Louisa (Orange & Spotsylvania)
- Changes should be made so any effluent that is going to be proposed to put in lake should have notification to everyone that lives around lake
- Should be a system for residents and property owners to have input and impact in decision making process
- We the people should be given a greater say
- Relatives have well that is already contaminated by bacteria from lake water so what happens when you have more effluent and more materials for bacteria to grow
- Against more effluent being put in lake

Christopher Owens

Comments Provided via Public Hearing

- From Spotsylvania County
- Questions the need for 99,000 gpd without knowing what development will ultimately consist of
- Questions the reluctance to describe further the plans for this property
- A 99,000 gpd permit will be a very valuable thing to have as could sell that capacity to someone else
- Lake Anna is already polluted and have heard others say we don't want to let that out because it will lower property values.
- Lowering of property values is in the mail as Lake Anna is polluted badly now
- Development community continues to market as cool, pristine waters of Lake Anna is untrue
- Raises wider issues of effluent discharges and water quality in general in the future

Ray Jurgel

Comments Provided via Public Hearing

- Has septic system on my property 300 feet from lake and it's not going bad
- The STP wants to discharge directly to lake, no more of this
- Can't keep going after private gain and put risk on public
- If don't have land necessary to support dream development you have in mind you might have to cut back on that dream development so you can use portion of land for septic system
- Your issue you deal with it
- Companies come and go and if they fail (the company) they walk away
- Will Louisa will run in take over and operate - Don't like that either
- Don't like once in five year inspection as personal vehicle is inspected more frequently than a STP - doesn't make sense
- Likens to driving with check engine light on
 - If it's not smoking, sputtering, etc. you keep on going and don't pull off to the side of the road
 - Do you think the STP will pull off to the side of the road because the check engine light is on
 - Not when you maybe have 4 years and 364 days to fix it
- Voluntary compliance is like saying speed limit is voluntary
- If things aren't right and you folks allow this be it on your head
- Not right and you can't let this go through
- Deny and let them sue you - much rather pick up tab to defend you in a law suit than deal with a STP that who knows how it will be working 10 years from now

Jim McCormack

Comments Provided via Public Hearing

- PE/systems engineer so comments tend to be more engineering driven than biological
- In the mid-90s wrote DEQ requesting action on a malfunction that occurred at current plant as discharge pipe broke loose from moorings & floated to surface
- Took DEQ too long to respond, but did respond and fix was made
- Told at that time (some 15 years ago)
 - DEQ inspect every two years (but now closer to five years)

- No surprise inspections that everything was planned in advance
- Depend on self-reporting of environmental data
- Recent history in county that was supposed to be reporting accurate data. Expensive law suit that county residents are bearing
- These problems will be magnified if permit issued to increase effluent by factor of five and the permit does not place absolute and permanent restrictions allowing no outside waste being brought to that site for treatment and dumping to lake
- Economic incentive for plant ownership to do that in future
- County needs to look at what happens if plant fails and encourages BOS to consider and pass ordinances that restricts further development of facilities to dump effluent in to lake
- Does not support permit that will allow more effluent in to lake than the current permit allows due to the uncertainty and risk
- Request DEQ to change policy regarding inspections and make such inspections at least annual and a provision for no notice or surprise inspections
- Agrees with previous commenter on “Trust but Verify”
- Needs to be positive well-orchestrated means to verify

Bill McGrath, Friends of Lake Anna Presentation - Part I of III

Comments Provided via Public Hearing and Email

- This particular sewage effluent discharge plant/permit resides in Louisa County so the Louisa Supervisors have a particular need to protect the health, safety and welfare of their residents and lake visitors
- Louisa can easily do this by passing an ordinance
- State Water Control Board can easily modify permit
- What are the sewage processing alternatives available at Lake Anna that will still allow for growth in the area
- We request State Water Control Board and Louisa County cap the discharge levels to the 2011 level of 20,000 gpd
- Permit should reflect that any sewage effluent should be processed to the level for discharging into a public water supply
- We request more protection from both the State Water Control Board and Louisa County for our citizens to insure public access to these large sewage disposal sites and inspections at least quarterly by both the county and state and on request by the public

Frank Jenkins, Friends of Lake Anna Presentation - Part II of III

Comments Provided via Public Hearing and Email

- Request dual redundancy be installed with all electrical and critical components at both the sewage processing plant and any collection facilities to minimize mechanical or electrical failures
- The DEQ website had the wrong date of February 16th in lieu of February 9th for this public hearing
- What are the legal ramifications of DEQ having two different dates advertised for the same public hearing
- DEQ staff in the public notice has recommended approval of this permit before a public hearing
- We request the State Water Control Board instruct DEQ staff to not make any recommendations for or against any permit until after a public hearing is held

Harry Ruth, Friends of Lake Anna Presentation - Part III of III

Comments Provided via Public Hearing and Email

- Board of Supervisors should include in an ordinance the following items:
 - 1) No additional sewage effluent to be discharged into Lake Anna
 - 2) Require a statement of need
 - 3) Require posting of a bond in the amount to be determined by Louisa County
 - 4) Require the permittee to notify Louisa County of all DEQ and Virginia Department of Health (VDH) sewage treatment violations that occur within their facility or collection system or discharge points

Eric Donnelly

Comments Provided via Public Hearing

- Can't add much more than what has already been said
- Here on fact finding mission
- Apparent disconnect between DEQ and County specific to monitoring

- Monitoring info on web site
- Lack of interest from Spotsylvania and Orange counties
- DEQ just follows laws and don't look to see if there are alternatives
- Thanks to Bryant for Q&A session
- Rumors and innuendos don't help
- Thank Doug Smith for clarifying rumors going around in their association
- Just renewal of 20,000 gpd wouldn't have any problems
- Doesn't seem to be any real plan for increase from 20,000 gpd to 99,000 gpd - cart coming before horse
- If they don't have enough land and someone have to give it to them to build a drain field then maybe overreaching
- For growth, but controlled growth

Dean Rodgers, General Manager, Louisa County Water Authority

Comments Provided via Public Hearing

- Don't have plant at lake and aren't involved in application
- Wants to clarify comment that lake is closed loop and everything that goes in stays in
- In several hundred square mile watershed there's 40 cfs coming in at minimum and always 40 cfs outfall of dam (except in drought)
- To clarify comments about additional effluent going in lake, more material for bacteria to grow
 - As amount of flow passes through plant the effluent is diluted further
 - Every plant that is in Chesapeake Bay watershed has been given total maximum load of pollution that can go in the lake
 - There is no other additional pollution that can go into bay watershed from plants including Lake Anna Environmental Services
 - If plant wants to increase amount of effluent it can, but it can't increase load in that effluent
 - May go from 5,000 gpd to 99,000 gpd but amount of pollution remains the same and the water gets cleaner
- Brought three mason jars with one containing raw sewage from regional plant, one containing effluent from regional plant, and lake water from Christopher Run Campground

James Kogle

Comments Provided via Public Hearing

- Why request 99,000 gpd where you're using approximately 5,000 gpd
- Could permit be modified to bring in additional sewage
- Surprised that they had three other properties on 208 that aren't on footprint so sounds like intent to bring in sewage so what is risk
- Most mechanical devices tested to mean time before failure (MTBF) so what about this plant
- Many outside factors beyond control so what happens if there's a failure at plant
- Cause and effect is facing massive clean-up and real mess
- Comment on previous speaker being aware of operators committing violations in Virginia so it could happen here
- Big risk
- Not if something fails, but when

Carol Mathieu

Comments Provided via Public Hearing

- Understands that if she didn't speak at hearing she couldn't come before SWCB at their March meeting so she decided to speak
- Appreciates all sides of the issue
- Thinks everyone wants to do the right thing
- Concerns about the permit process where we're doing everything within the law and regulations
- Always talking about *E.coli* but not addressing other contaminants
- Will reserve other comments for State Water Control Board meeting

Myrna Bass

Comments Provided via Public Hearing

- Property on both ends of lake and has seen pollutants at other end of lake near Stubbs bridge due to runoff from farms and Contrary creek from mines

- Concerned about runoff from Cutalong
- Heard stories this evening about people who ran STPs that have lost their jobs because they didn't do what they were supposed to but not until they'd been doing it for 15 years
- Concerned about drinking water at lake, concerns about swimming in lake
- Issue of trust is big thing in community
 - Many come from larger communities up north where we see things not done right and we came down here to get away from it
- Expectations that county, State and DEQ will protect us
- Fact is these entities are run by people who make mistakes and sometimes they're in positions of authority because it benefits them and they have other agendas
- Sometimes they get pulled in direction that are not in best interest of other people
- DEQ has limited people to do inspections
- We work in faulty system because we're people and we have limited funds and processes
- From medical center to hospital this evening and from town houses to seven tier hotel this evening
- No doubt there are plans for this property, but whether they can pull it off is another issue
- You can bet there plans and this increase is in line with these plans
- Believes a lot of the Board of Supervisors have been here a long time and may not be far enough away from issues to know what's going on
 - Benefit to listen, step back and look at big picture
 - We've had earthquake, discharges, etc. that have happened and what happens when trying to sell homes 20 years from now
 - Nuclear power plant on fault that was covered up
 - If you don't take care of these issues now, you're going to be in same position as the power plant
 - County residents will be paying for those mistakes if you don't take care of them now

Steve Monoski

Comments Provided via Public Hearing

- Against additional effluent in to lake
- If permit approved, should be capped at 20,000 gpd
- Restrictions in permit to not allow any outside sewage to come in to plant
- Hope the enhancements to permit mentioned by Doug Smith will be included
- Would like State Water Control Board to promulgate new rules to monitor the warm side
 - Don't know why we can't watch both sides
 - Know what you're going to tell me
 - Talking about people's health, increased water temperatures, droughts
 - This is a big lake
- Board of Supervisors disappointed in you
 - Four out of seven here
 - This is a county issue and if we don't have a county what good are the individual districts
 - Lot of uproar going on and takes a lot to get people out
 - Work to get it together

Carmine and Kathy Largo

Comments Provided via Email

- Concerned about the impact that increased sewage waste discharge into the lake will have on the health and safety of those families who enjoy the recreational benefits of the lake
- It is apparent that DEQ's policy to inspect the sewage treatment facility one every five years is inadequate
- In the event of spillage it is not clear to me that Lake Anna Environmental Services will be held liable to clean it up
- County of Louisa doesn't have a strategic development plan to control commercial and residential development around the lake
- Lake Anna Environmental Services has not demonstrated the requirement to increase their sewage discharge fivefold

Christine McCotter

Comments Provided via Email

- Against the permit for Lake Anna Environmental Services to discharge the additional 79,000 gallons of effluent into Lake Anna
- Property values will decline
- There are other ways of disposing of the effluent
- Alternatives need to be explored
- Dumping in the lake is not wise
- Do not reissue a permit to Lake Anna Environmental Services

Billy Pritchard

Comments Provided via Email

- At no time has anyone indicated what the level of contaminants is in the lake now
- Irrational to increase the input of contaminants without knowing where we are now
- Future requests could be handled by a no permit or limited discharge

Dan Baker

Comments Provided via Email

- Do not allow increased amounts of treated sewage effluent to enter Lake Anna
- There are other alternatives that make much more sense

Mark Rausch

Comments Provided via Email

- Do not allow increased amounts of treated sewage effluent to enter Lake Anna
- There are other alternatives that make much more sense

Jim Brooksbank

Comments Provided via Email

- I earnestly hope you do not consider supporting the permit to allow for an increase in effluent to be deposited into the lake
- Cannot imagine even considering such a drastic and damaging effect of increasing the levels of effluent allowed

Michael Ireland

Comments Provided via Email

- Strongly support your actions to ensure that the level of particulate matter in the Lake Anna effluent will capped to that existing prior to the request to increase the volume to 100,000 gpd
- There is no reason why the water cannot be made of drinkable quality before it is put in the lake
- Demand they have fool proof backup systems

William and Elizabeth Blanchard

Comments Provided via Email

- Official protest against such an issuance
- Against any amount of discharge that could possibly hurt a fragile environment such as Lake Anna

Donna Finnegan

Comments Provided via Email

- State Water Control Board should deny issuance of the permit allowing more treated effluent to Lake Anna
- Developer should pay for an alternative and/or scale down their project accordingly
- Strongly object to the issuance of this specific permit as well as discharging of any sewage effluent

Linda Chaney

Comments Provided via Email

- Government is more concerned about allowing developers to make money than with the reality that allowing effluent into Lake Anna, or any other clean body of water, contaminates that water
- Is it necessary to develop and despoil all the land there is

Harry Ruth, Friends of Lake Anna

Comments Provided via Email

- The applicant said at the public hearing that all sixteen of their previous violations were administrative in nature. The data you previously forwarded indicated Lake Anna Environmental Services exceeded and discharged into Lake Anna Sewage Effluent their Total Suspended Solids Concentration in May 2005 by 50% and again in

January 2006 by over 25%. In addition, they exceeded Ammonia Concentration in January 2006 by over 100%, and again in September 2006 by 50%, also in March 2007 by almost 200%. Again in June 2011, your report indicates that the sewage effluent discharged had a concentration of Max – CL2 Inst. Res. Max (chlorine) which exceeded the permit limit by over 1,000% when the permit Limit was 0.010mg/L and LAES discharged 0.125mg/L. All of these discharges exceeded the permit limits and put the public that swim and recreate in the immediate area of the discharge at risk.

- In addition, the applicant in March 2011 received a permit violation for failing to monitor the lagoon liner (which retains all of the sewage in ponds above the lake). The permit indicated the liner was to be checked a minimum of 2 times a year.
- Concern is if the applicant does not tell the truth in a public hearing then when can DEQ, SWCB and public believe him
- National Pollutant Discharge Elimination System regulations require that permits be approved for no more plant capacity and volume of sewage effluent than can reasonably be expected in a reasonable time
- Neither the applicant or DEQ can state with the degree of certainty required by the National Pollutant Discharge Elimination System program either the volume of the composition of the sewage effluent to be generated or when it will be generated
- Application is premature at best
- We request compliance with the National Pollutant Discharge Elimination System laws and an Environmental Impact Study be conducted that will provide a scientific and technical review that this application warrants due to the potential risks to Lake Anna and the Chesapeake Bay watershed
- DEQ erred in issuing a Finding of No Significant Impact ruling in connection with this application thereby relieving the applicant of responsibility for a full Environmental Impact Study
- The Finding of No Significant Impact ruling appears to reflect a conclusion that this application is for a simple upgrade of an existing plant
- A Finding of No Significant Impact ruling under these circumstances finding, based essentially on a very limited paper review, appears irresponsible
- It is requested this Finding of No Significant Impact ruling be changed and an Environmental Impact Study be performed before this permit continues to be processed
- Who and how often is the complete discharge pipe inspected to insure that its complete integrity is not compromised that causes sewage to leach into the surrounding ground and /or the shallow water public swimming areas of the lake before it reaches its ultimate approved discharge location

Louisa County Board of Supervisors

Comments Received via Email and Fax

- Louisa County Board of Supervisors voted to formally oppose reissuance of the permit at the present requested level of 0.099 MGD
- Board of Supervisors is supportive of reissuance of the permit at the former level of 0.020 MGD
 - The Louisa County Water Authority has an application pending for water withdrawal for public use from Lake Anna. The effect of this increase in permitted effluent has not been considered in light of this permit application.
- Consideration of alternatives to discharge to state water have not fully been considered
 - Present and long-term effects of expansion of the discharge permit to accommodate 0.099 MGD have not been fully considered
 - There is no demonstrated need for a discharge permit at an increased level and approval of an expansion of a wastewater treatment plant to that size and scope at the present time and granting the expanded permit to 0.099 MGD would be against the will of the governing body and not in full consideration of protecting waters of the state

Duane Redic

Comments Received via Email

- Process is procedural and process compliant in nature and does not lend itself to moral, environmental quality, decision making
- Does not appear to be the proper authority to facilitate or enact on many of the issues and recommendations we are trying to raise as paramount to the process

- Business as usual and a rubber stamp for applicants if procedures and guidelines have been met
- We should in no way even be considering approving a permit to add five times more effluent into the lake without doing a full environmental impact study and after analyzing a comprehensive minimum five – ten year business growth plan for the lake

Chris Shultis

Comments Received via Email

- Why the increase if only 5,000 gallons are currently used
- Plans that require this expansion have not been submitted to the Board of Supervisors or the community for approval
- DEQ inspects once a year
- How would DEQ or the public know of abuses with a check only once a year
- If you can't drink it don't put it in the lake
- Alas it appears you only grant permits, so it is up to the community to become the stewards of the lake protecting and conserving its beauty
- Deny unneeded increase
- Concerned about Dominion's apathy about the dangers of high temperatures on the proliferation of *E. coli*
- Who is monitoring the water - Shouldn't this be the responsibility of Dominion and DEQ

Duane Redic

Comments Received via Email

- Aside from the obvious permitting approval based on guidelines what authority or power if any does DEQ have to enact on many of the suggestions and recommendations that have been submitted as part of this hearing process
- What authority does DEQ have to take your "Environmental Quality" tag seriously and to ensure that decisions made and permit approved that will preserve and enhance the environmental quality of the lake
- If our concerns about the ineffectiveness and inadequacy of the existing process have any validity what proactive measures is DEQ (or others) taking that will ensure our concerns are being address as well as enable DEQ to effectively do the job we expect them to
- If you do not have any authority to make a moral and value assessment regarding permitting requests and the like then this whole hearing process has been a huge waste of time for everybody and has just served to be a big PR event to give the impression that you are proactive with community affairs when in fact it is business as usual and nothing is done to protect the lake
- If you are unable to provide meaningful answers to these questions please pass them on to the person or persons who can
- This process is not just a one way street where we just talk...you listen...and send us a standard we got your comments response
- We need to understand once and for all what authority DEQ has (beyond procedural) to truly protect the lake and our environment

Issuance of a Virginia Water Protection (VWP) Individual Permit Unit 3 at Dominion's North Anna Power Station Part III – Major Surface Water Withdrawal for Operational Activities and Lake Level Rise, draft VWP Permit No. 10-2001 Louisa, Orange, and Spotsylvania Counties, Virginia:

I. PROJECT BACKGROUND

Project Description

The applicant, Virginia Electric & Power Company dba Dominion Virginia Power, proposes to construct a new nuclear unit (Unit 3) at the existing North Anna Power Station (NAPS) site to provide additional base load electric service to meet a growing demand. The NAPS site is located at 1022 Haley Drive in Louisa County, Virginia.

The applicant submitted three VWP permit applications corresponding to the three parts of the project, which are summarized below:

- Part I – Surface Water Construction Related Impacts, VWP Permit No. 10-1256. Part I of the project proposes surface water impacts related to construction activities and installation of the intake structure for the Unit 3 operational water withdrawal. This VWP Permit No. 10-1256 was issued on April 15, 2011.
- Part II – Minor Surface Water Withdrawal for Construction Activities, VWP Permit No. 10-1496. Part II of the project proposes a minor surface water withdrawal for construction related activities such as dust suppression and for soil moisture control. This VWP Permit No. 10-1496 was issued on April 15, 2011.
- Part III – Major Surface Water Withdrawal for Operational Activities and Lake Level Rise, JPA No. 10-2001. Part III of the project proposes a major surface water withdrawal to support operational activities of Unit 3 and a change to shoreline wetlands as a result of a permanent increase of 3 inches in the normal target pool elevation of Lake Anna and resulting increase in the Waste Heat Treatment Facility (WHTF) and is the subject of this memorandum.

Part I (VWP Permit No. 10-1256) and Part II (VWP Permit No. 10-1496) were presented before the State Water Control Board (SWCB) on April 14, 2011. The SWCB voted unanimously in favor of staff's recommendation that the SWCB approve issuance of the permits for these two parts. VWP Permit Nos. 10-1256 and 10-1496 were issued on April 15, 2011.

Proposed Water Withdrawal Amounts

The draft permit will allow the applicant to withdraw from Lake Anna a total maximum daily volume of 31.8 million gallons per day (mgd) and a consumptive maximum monthly average volume of 22.0 mgd to support the operation of Unit 3, mainly for cooling. The surface water withdrawal is to be used for the Circulating Water System, Ultimate Heat Sink Cooling Tower Make-up Water System, Station Water System and Fire Protection Water Supply System.

Proposed Lake Level Management and Lake Anna Dam Releases

The conditions in the draft permit that govern lake levels and release are summarized below.

- Lake Level Contingency Plan (LLCP)
The release schedule of the LLCP from the facility's existing VPDES permit (VA0052451) is incorporated into the release schedule in this draft VWP permit. The proposed VWP permit would govern releases from the Lake Anna Dam after the permittee has notified DEQ of their intent to implement a permanent increase of 3 inches in the normal target pool elevation of Lake Anna to support Unit 3 and implements the increase.
- Modes of Cooling Tower Operation
The draft permit requires transition between cooling system modes of operation (Energy Conservation Mode versus Maximum Water Conservation Mode) to reduce water use during times when lake levels decrease below 250.0 feet above mean sea level (msl).

- **Flow Augmentation Release**
Through modeling efforts conducted by staff, inclusion of a flow augmentation release (FAR) is required by the draft permit to supplement downstream flow during dry periods. Storage for a FAR will be maintained by increasing the lake level at which 20 cubic feet per second flows must be released from 248.0 feet msl to 248.1 feet msl.
- **Recreational Flow Release**
The proposed draft permit includes a condition that requires the release of recreational flows to provide recreational opportunities on the North Anna River, specifically for paddling, each Saturday in May and June when lake level is above 250.0 feet msl.

Proposed Change to Shoreline Wetlands Associated with Lake Level Rise of Three Inches

The draft permit authorizes a change to shoreline wetlands as a result of a permanent increase of 3 inches in the normal target pool elevation of Lake Anna to 250.25 feet msl and resulting increase in the WHTF to provide additional storage to mitigate the effects of the consumptive withdrawal.

Proposed Compensation

The draft permit requires the consumptive water withdrawal be mitigated through an increase of 3 inches in the normal target pool elevation of Lake Anna and a resulting increase in the WHTF, and compensation for a change to shoreline wetlands be provided through the purchase of 8.14 wetland credits from a wetland mitigation bank or the Virginia Aquatic Resources Trust Fund.

Authorization to Convene a Public Hearing

Since the pre-application notification in August 2010 required by 9 VAC 25-210-75 of the VWP Permit Program regulations, staff received 70 inquires and 44 comments from 70 citizens. Staff held informational meetings and met with citizen groups, such as the Lake Anna Civic Association, Friends of Lake Anna, and stakeholders located downstream of the Lake Anna Dam, and local officials such as Louisa County Board of Supervisors, during this application process and the Instream Flow Incremental Methodology study, which began in 2007. Staff understood citizens are concerned about the proposed activities. Staff is also aware citizens intended on providing comments formally during the public comment period.

Due to the level of public interest prior to the submittal of the Part III application, staff anticipated significant public interest and participation during the public comment period for Part III. The majority of comments received during the comment period for Parts I and II pertained to the activities proposed under Part III of the project. The majority of comments received are within the VWP Permit Program's purview and are substantial and/or disputed issues relevant to the VWP Permit Program. Staff anticipated receiving requests for a public hearing on the proposed draft permit and requested that the Director of DEQ authorize staff to convene a public hearing.

The Director authorized a public hearing regarding the proposed Part III draft permit on November 21, 2011.

Draft Permit and Hearing Public Notice

The public notices were published on December 15, 2011 in the following newspapers: *Central Virginian*, *Fredericksburg Free Lance-Star*, *Hanover Herald* and the *Richmond Times-Dispatch*.

Notification of the draft permits and public hearings and copies of the public notices were sent to the localities in which activities are proposed and all riparian landowners notified of the receipt of the application for Part III.

Public Hearing

The public hearing was held on January 18, 2012, from 7:00 p.m. to 9:00 p.m. in the Auditorium of Louisa County Middle School in the Mineral, Virginia. Mr. Robert Dunn served as the Hearing Officer. An informal briefing session was held prior to the hearings from 6:00 p.m. to 7:00 p.m. in the same location. During the hearing, there were 17 speakers.

Public Comment Period Comments

The public comment period was from December 16, 2011 to February 9, 2012. During the public comment period, staff received written and oral comments from 75 respondents, which included private citizens and 11 non-profit organizations, businesses and/or local government. The non-profit organizations, businesses, and/or local government represented were Coastal Canoeists, Dominion Virginia Power, Friends of Lake Anna (FOLA), Friends of the Rivers of Virginia (FORVA), Hanover County, Lake Anna Business Partnership, Lake Anna Civic Association (LACA), Louisa County Board of Supervisors, Louisa County Chamber of Commerce, Louisa County Water Authority, and White Birch Paper Bear Island LLC Division. Of the comments submitted, 67 comments were in support of the permit, 6 comments were not in support of the permit, 1 comment did not state support or lack of support and 1 comment requested denial of the permit. Staff also received requests for information from 23 persons.

Status of USACE Individual Permit

USACE considered all activities within the purview of their program under one application (VWP Permit No. 10-1256), including the change to shoreline wetlands associated with the proposed three inch rise. The USACE issued a permit for activities within their purview on September 29, 2011.

II. SUMMARY OF COMMENTS DURING PUBLIC COMMENT PERIOD

The comments voicing concern that were received during the comment period for Part III and are within the purview of the VWP Permit Program regarded the following:

- Concerns regarding the volume of water proposed to be withdrawn and consumed for the operation of Unit 3, including requests for more dry cooling.
- Concerns that conservation measures were not considered or are not adequate, resulting in too much water being used, affecting the uses of Lake Anna and areas downstream of the Lake Anna Dam.
- Confusion regarding the withdrawal limits in the permit versus volumes requested in the application and belief the permit allows more water than requested.
- Concern from lake users on the potential to increase dam releases to eliminate adverse impacts downstream from flow reductions.
- Concerns regarding the potential impact of dam releases of less than 40 cfs on downstream water intakes and ability to meet water quality flow-based limits of permitted discharges.
- Concerns that recreational flow releases will impact lake users.
- Concern that the recommended recreational flow release of 177 cfs may not provide sufficient flow in the desired recreational reaches of the North Anna River.
- Question how the IFIM study incorporated the WHTF into the analysis. Request the IFIM study be revisited to reflect the WHTF design water levels have not been maintained.
- Concerns of changes in water elevations in Lake Anna despite the proposed three inch increase in the targeted normal pool elevation.
- Request for a comprehensive Lake Anna watershed impact study that evaluates all proposed and future water permits. Concern permits issued without actual inflow into Lake Anna data.
- Statement that Louisa County intends to submit an application for a water withdrawal from Lake Anna and request their need be considered.
- Comments that Lake Anna and WHTF are currently mismanaged and a lake management plan should be developed to better regulate water levels and provide for adequate conservation measures.
- Concerns regarding the 100 hour operational allowance to operate in EC Mode despite lake elevation.
- Concerns that lake recreational uses will be negatively impacted by the withdrawal due to lower lake levels. Request that the uses of recreation and power generation be fairly balanced.
- Question if “state waters” and “surface waters” include the WHTF.
- Request for improvements to current monitoring methods of lake elevation and water temperature in Lake Anna and WHTF.
- Request from the applicant that the permit clarify that the conditions in Part I.E (Modes of Operation) become effective on the date that the Unit 3 begins commercial operation.
- Request the withdrawal be reviewed after one year to determine impacts on the watershed and adjust the limits as necessary, and then annually thereafter.

- Concerns that water permits for the proposed Unit 3 project and for the Lake Anna watershed are being processed in a piece-meal fashion.

III. SUMMARY OF CHANGES TO DRAFT PERMIT IN REPOSE TO CITIZEN COMMENTS

Staff added the following permit conditions to the VWP permit to address citizen comments:

- Part I.E.1. was included at the applicant's request to clarify that Section E of the permit does not apply while performing tests on the system prior to commercial operation of Unit 3.
- Part I.F.4.b. addresses a request for larger release rates when increasing flows from 20 cfs to 40 cfs to quickly alleviate situations when reduced releases cause or may cause impact to potable water supplies.
- Part I.G.2.a.(1) was added to include the requirement that the lake level monitoring plan include a procedure for daily monitoring and recording of water elevation at the Lake Anna Dam.
- Part I.G.2.a.(6). was added at the request of respondents proposing lake level monitoring in the upper reaches of Lake Anna to address their concern regarding higher water levels during storm events.

Staff revised the following permit conditions to address citizen comments:

- Part I.C.3 was revised to reflect change in the name of the Office of Water Supply.
- Part I.F.3. was revised to clarify that the condition pertains to the water elevation of Lake Anna.
- Part I.F.3.a was revised to include language that clarifies the intent of the condition is for the applicant to contact stakeholders prior to initiating decreases in Lake Anna Dam releases below 40 cfs and to change in the name of the Office of Water Supply.
- Part I.F.3.c. was revised to clarify that "adverse impact" pertains to existing downstream beneficial uses and to include a definition of beneficial uses to address concerns of reduces dam releases impacting downstream users.
- Part I.F.4 and 4.a. were revised to explicitly state the transition between release rates of 20 and 40 cfs rather than referencing the relevant permit condition.
- Part I.F.5. was revised to address concerns that the recreational release rate of 177 cfs may not be suitable for recreation downstream and a request for a test period to determine a suitable flow rate.
- Part I.G.1.b and H.3 were revised for grammatical changes.
- Part I.G.2.a was revised to remove the first sentence as it conflicted with the intent of Part I.G.2.a.(6).
- H.2 was revised to remove a sentence that was duplicative with Part I.G.4.d.

IV. STAFF RECOMMENDATION

Staff provides the following recommendations to the Board based upon agency files and comments received during the public comment period.

Staff recommends that the Board find that:

- The permit has been prepared in conformance with the applicable statues, regulations and agency practices,
- The proposed activity is consistent with the provisions of the Clean Water Act and State Water Control Law;

- The proposed permit addresses avoidance and minimization of surface water impacts to the maximum extent practicable;
- The proposed activities will not cause or contribute to significant impairment of state waters or fish and wildlife resources;
- All public comments relevant to the permit have been considered,
- The limits and conditions in the permit have been established to ensure the proposed activities are performed in a manner that protects beneficial uses.

Staff recommends that the Board:

- Approve the permit as presented in your Board package, and
- Authorize the Director to issue the permit as approved by the Board.

Summary of Public Comments and Staff Responses

Proposed Issuance of Virginia Water Protection Individual Permit No. 10-2001

Part III – Major Surface Water Withdrawal for Operational Activities and Lake Level Rise Unit 3 at Dominion’s North Anna Power Station

Comments received that voiced concerns or opposition to Part III of the project (draft VWP Permit No. 10-2001) that are within the purview of the Virginia Water Protection (VWP) Permit Program are provided below in the first section of this document.

Major Water Withdrawal

1. *Concerns regarding the volume of water proposed to be withdrawn and consumed for the operation of Unit 3, including requests for more dry cooling.*

The applicant minimized their proposed use of water by selecting a cooling system to cool the proposed third reactor in a manner that differs from the existing Units 1 and 2. Units 1 and 2 are cooled by once-through water that is discharged into the Waste Heat Treatment Facility (WHTF) after it passes through the system, thus requiring a large volume of water to cool the reactors. They determined that a closed cooling system would reduce water consumption, minimize thermal impact to WHTF and Lake Anna, and reduce entrainment and impingement impacts.

The applicant reviewed several closed system cooling alternatives, such as one hundred percent wet tower cooling, combination of wet and dry cooling, and 100 percent dry tower cooling, to further reduce environmental impacts. Although 100 percent wet cooling was determined to be the most energy efficient alternative, this alternative was rejected because it had the most environmental impact of the closed system options and this alternative would result in lake levels occurring below 248.0 feet mean sea level (msl) approximately 11 percent of the time.

One hundred percent dry tower cooling was determined to be less energy efficient and more expensive to implement and operate than wet cooling system alternatives due to limitations in providing sufficiently cooled water during extreme summer temperature conditions that are necessary for generating plant processes to operate properly. As a result, generation output under this alternative would be limited due to the potential for the unit to be required to shut down completely during extreme summer temperature conditions, which does not meet the project purpose for a baseload unit. The applicant determined that this cooling system alternative would require four times the land area, three times the operating cost and two and half times the capital cost of the selected alternative. Additionally, the cost of developing a “first of its kind” technology as currently there are no nuclear power generation units in the world that cooled using 100 percent dry cooling. As a result, the applicant determined that 100 percent dry cooling was not a practicable alternative in light of project purpose, cost and existing technology.

The applicant also reviewed a combination of wet and dry cooling with varying degrees of wet and dry cooling. New technology in tower designs allows for operational flexibility during different times of the year to balance water conservation and energy use. The first alternative was the rejection of one-third of heat through dry cooling and remaining two-thirds of heat rejected through wet cooling at design conditions and the second the rejection of two-thirds of heat through dry cooling and remainder one-third of heat rejected through wet cooling at design conditions. The applicant determined that the latter alternative was deemed not practicable as the additional dry cooling of two-thirds resulted in capital cost, operating cost, equipment size and land use that was higher (\$172.2 million versus \$102 million) than the other alternative proposing rejection of heat through one-third dry cooling. Additionally, the water savings was not significantly greater between the two alternatives and the additional dry cooling has limited potential to reduce frequency in lake level decreases below 248.0 feet above msl. The

applicant selected the alternative that proposes to reject one-third of heat through dry cooling and remainder two-thirds of heat rejected through wet cooling at design conditions.

The selected alternative consists of a hybrid cooling tower (wet and dry cooling) and a dry cooling tower to minimize the volume of water withdrawn for cooling. Through the Instream Flow Incremental Methodology (IFIM) study, operational procedures for the cooling towers were proposed to conserve water for Lake Anna and habitat downstream of the Lake Anna Dam during times of low flow.

The applicant demonstrated that the selected alternative allows operational flexibility and provides water savings over a once-through cooling system or a conventional cooling tower. The proposed Unit 3 cooling system will withdraw approximately 1,621.3 million gallons per day (mgd) less and consume 4 mgd less water than a once-through system like that used in the existing Units 1 and 2 and will consume approximately 7.3 mgd less than the one hundred percent wet tower cooling alternative. While the selected alternative will use more water than 100 percent dry cooling, the latter alternative was determined not to be practicable as it does not meet the project purpose due to the costs associated with 100 percent dry cooling.

Based upon staff's review of the alternatives analysis conducted by the applicant, the selected cooling system alternative is the least environmentally damaging and most practicable alternative in light of the overall project purpose.

2. *Concerns that conservation measures were not considered or are not adequate, resulting in too much water being used, affecting the uses of Lake Anna and areas downstream of the Lake Anna Dam.*

Water conservation is a significant component of the review for a water withdrawal application. Water conservation measures that have been applied to the major surface water withdrawal for operations are the selected cooling system, lake level management, Lake Anna Dam releases, and the proposed three inch rise in water elevation.

Selected Cooling System

As discussed under No. 1, the applicant minimized their proposed use of water by selecting a system to cool the proposed third reactor in a manner that differs from the existing Units 1 and 2.

Lake Level Management

Transition between the two cooling system modes (Energy Conservation Mode versus Maximum Water Conservation Mode) during the operation of Unit 3 is based upon the water elevation of Lake Anna and is a condition of the permit to minimize the volume of water withdrawn and consumed (Part I.E.). Through the IFIM study, two cooling system operation modes were proposed to conserve water from Lake Anna and habitat downstream of the Lake Anna Dam during times of low flow. Below is a description of each cooling operation modes:

- Energy Conservation (EC) Mode: Operation of the hybrid tower only, utilizing both the dry cooling and wet cooling components to remove heat.
- Maximum Water Conservation (MWC) Mode: Operation of the dry tower and the hybrid tower. In MWC mode at design conditions, a minimum of one-third of the heat would be removed by dry cooling (the dry tower with the dry section of the hybrid tower) with the remaining heat removed by wet cooling (wet section of the hybrid tower)

The Unit 3 cooling system is to be operated as follows to reduce water consumed in the cooling of Unit 3 operations:

- Lake elevations at and above 250.0 feet msl, operate in EC Mode
- Lake elevations below 250.0 feet msl, operate in MWC Mode.

This set of conditions will insure that the losses in Lake Anna are reduced during times of low lake storage. As proposed, operating in MWC Mode is estimated in the application to save 686.11 million gallons of water during an average year and 2,166.12 million gallons during a dry year.

Lake Anna Dam Releases

Measures are included in the permit (Part I.F.) to conserve water levels in the lake and flows downstream of the Lake Anna Dam, which serves to protect beneficial uses in the lake and downstream of the Lake Anna Dam. During the evaluation of this water withdrawal for Unit 3, staff incorporated the release schedule of the existing Virginia Pollutant Discharge Elimination System (VPDES) permit for the facility (No. VA0052451) based upon the existing Units 1 and 2 with the necessary modifications and additions to account for the additional withdrawal for Unit 3 proposed in this permit. This permit proposes a change to the trigger level from 248.0 to 248.1 feet msl to provide storage for a Flow Augmentation Release (FAR). A FAR of greater than 20 cfs but not more than 40 cfs will be reserved to be used only when a committee convened once set triggers are met and Department of Environmental Quality (DEQ) decides it is appropriate to increase flows above 20 cfs to address impacts of the reduced flows on downstream beneficial uses. In addition to the FAR, releases from the Lake Anna Dam may be increased at any time if directed by DEQ to eliminate any adverse impact from reduced flows downstream. The Lake Anna Dam release schedule in the permit is as follows:

- Lake elevations at or above 250.0 feet msl, release a minimum of 40 cubic feet per second (cfs).
- Lake elevations below 250.0 feet msl and above 248.1 feet msl, target a release of 40 cfs.
- Lake elevations at or below 248.1 feet msl, target a release of 20 cfs.

Prior to initiation of water withdrawal activities authorized by this permit, the applicant shall comply with the Lake Anna Dam flow release conditions in the facility's VPDES permit No. VA0052451.

Three-Inch Rise in Lake Anna Water Elevation

Impacts due to the consumptive surface water withdrawal are to be mitigated through an increase of 3 inches in the normal target pool elevation of Lake Anna and resulting increase in the water level of the WHTF to provide additional storage volume. The IFIM study concluded that the proposed consumptive water withdrawal associated with the selected cooling system alternative will increase the occurrence of low flow releases from the Lake Anna Dam (20 cfs) to 6.3 percent, which is 1.7 percent more than the existing condition of 4.6 percent. The study further concluded that the affects of the consumptive withdrawal could be mitigated by creating more storage capacity in the lake through an increase in the normal target pool elevation.

An increase of three inches in lake level was selected as it will mitigate the effects of the consumptive withdrawal while also minimizing impacts to shoreline wetlands. A three inch rise in water levels will decrease the occurrence of low flow releases associated with the consumptive withdrawal for Unit 3 from 6.3 percent to 5.5 percent, resulting in low flows occurring one percent more frequently than the existing condition. The effect on lake level was also studied. Under existing conditions, the water elevation of Lake Anna is below 250.0 feet msl approximately 35 percent of the time. Staff analysis indicates that the proposed three inch rise would offset the effects of the major surface water withdrawal and recreational dam releases so that there will be no increase in occurrence of water elevations below 250.0 feet msl. The selected alternative also addresses concerns of lake stakeholders regarding the potential effect of higher water elevations by selecting a lake level rise that compromises between varying concerns associated with lake elevations while still mitigating the affects of the consumptive withdrawal. Based upon an evaluation of the difference in peak water elevations, the proposed condition is expected to be on average 2 inches higher than current conditions during storm events. Additionally, the applicant will continue to operate the Lake Anna Dam to target the normal pool elevation.

Staff has determined there is reasonable assurance that the activity, as proposed to be authorized by the draft permit, will protect beneficial uses, will not violate applicable water quality standards, and will not cause or contribute to significant impairment of state waters or fish and wildlife resources, provided the applicant complies

with all permit conditions. Based upon staff's review and modeling, the conditions in the draft permit are protective of existing beneficial uses.

3. *Confusion regarding the maximum annual withdrawal limits in the permit versus average daily volumes requested in the application and how these volumes correlate. Believe the permit allows the applicant to withdraw and consume approximately 35 percent and 39 percent, respectively, more water than requested in their application.*

The withdrawal volumes in the application and those in the draft permit were determined using the Lake Anna Water Budget Model (model) developed by the Bechtel Corporation that simulates Unit 3 operations using approximately 29 years of historical data. This same model was used during the U.S. Nuclear Regulatory Commission (NRC) licensing process and the Instream Flow Incremental Methodology (IFIM) study. Impacts associated with the withdrawal were evaluated based on withdrawal volumes estimated by the model, not a set maximum daily or annual volume. The model predicted withdrawals based on cooling tower efficiency scaled to the meteorological conditions and mode of operation as determined by lake level. The consumptive loss calculations were based on a model of cooling tower performance that considered energy demand, daily average temperature and daily average relative humidity.

The volumes in the application and in the draft permit correlate and both are based upon the model. Strict comparison of average daily volumes calculated from a maximum annual volume in the permit to average daily volumes requested in the application is not appropriate as a simple conversion calculation (like that done by the commentors) does not take into consideration variations in withdrawal and consumptive use that occur based upon cooling system mode of operation (EC Mode versus MWC Mode) and ambient conditions over the 29 year modeling period.

The daily average total (consumptive and non-consumptive) withdrawal volume of 18.7 mgd and average daily consumptive volume of 14.0 mgd requested in the application are based upon the operation of both cooling system modes (EC Mode and MWC Mode) and Unit 3 operating at a 96 percent capacity factor, which assumes the unit is out-of-service 4 percent of the time over the long term. Whereas, the maximum daily total withdrawal of 31.8 mgd and maximum daily consumptive volume of 23.3 mgd requested in the application and the maximum volume limitations in the draft permit are based upon the cooling system operating in EC Mode at 100 percent capacity over the 29 year modeling period.

The maximum daily total (consumptive and non-consumptive) withdrawal of 31.8 mgd is the largest one day withdrawal during the 29 year modeling period. The maximum annual total withdrawal volume is based upon a maximum daily average withdrawal of 26.0 mgd obtained during any 365 day running period over the modeling period. From this value, the proposed maximum annual volume ($26.0 \times 365 = 9,490$ million gallons) is obtained.

The maximum monthly and yearly consumptive volumes are based upon the maximum daily average consumptive withdrawal obtained during any 31 day and 365 day running periods over the modeling period of approximately 29 years, which are 22 mgd and 18.9 mgd, respectfully. From these values, the proposed maximum monthly average of 22.0 mgd and maximum annual ($18.89 \times 365 = 6,884$ million gallons) consumptive volume limitations were obtained.

Maximum volumes are used as permit limits to allow the applicant to meet the maximum anticipated demand for the time period. Average volumes are required information in an application to provide staff with information to evaluate the applicant's request. However, setting a limit based on average volumes is not feasible since the long term average values are based on the full modeling period and do not account for extreme events and variability across seasonal and annual time scales.

The withdrawal limits in the draft permit are based upon the application and do not allow more water to be used than requested. The maximum annual consumptive loss volume of 6,884 million gallons deals with the maximum withdrawal that could result in a single year if inflows were such that lake levels never dropped below 250.0 feet

msl. This maximum is only possible if unusually high inflows to Lake Anna were to occur, resulting in a zero incidence of surface elevation triggers requiring water conservation operations in Unit 3. The permit includes conditions, in addition to conservation measures and withdrawal requirements based upon lake level, which prevent the applicant from withdrawing the maximum volume without need or reason.

4. *Concern the maximum consumptive volumes in the draft permit are not the same as those modeled in the IFIM study.*

The maximum consumptive water withdrawal volumes modeled in the IFIM study are the same maximum consumptive withdrawal volumes proposed in the application and used to develop the limits in the permit. The IFIM study focused on the consumptive impacts of the withdrawal. The limits in the permit include both the total volume that may be withdrawn from Lake Anna as well as limits on the amount of that volume that can be lost to consumption. The non-consumptive portion of the total withdrawal that consists of 8.5 mgd will return to Lake Anna through the WHTF, and thus this the amount does not alter the IFIM study nor affect Lake Anna water elevations.

Lake Anna Dam Flow Releases

5. *Concern from lake users on the potential to increase Lake Anna Dam releases to eliminate adverse impacts from flow reductions and confusion as to the purpose of the Flow Augmentation Release (FAR) and belief it currently is not allowed.*

Staff must consider the beneficial uses of both Lake Anna and areas downstream of the Lake Anna Dam. The VPDES permit for the facility includes a provision that allows for flow releases to be increased at any time to eliminate any adverse impacts to downstream areas that may result when releases from the Lake Anna Dam are reduced to conserve lake elevations. The VPDES permit has had this provision since the requirement for a Lake Level Contingency Plan (LLCP) was enacted in 2000. This provision is being carried forth into the Virginia Water Protection (VWP) permit for Unit 3 that will assume oversight of the dam releases. In the VWP permit, staff has clarified when relief of the flow reduction may be conducted by adding parameters. Additionally, staff proposes to create storage for such a release by increasing the lake elevation of when flow must be reduced from 40 cfs to 20 cfs from 248.0 feet msl to 248.1 feet msl. The permit also allows for a flow release increase at any time to eliminate adverse impacts to downstream areas, and based upon staff's modeling analysis, it is anticipated that a FAR would occur for a total of 32 days during a 21 year modeling period (0.4 percent of the time). Since the incorporation of the LLCP in the VPDES permit, DEQ has not needed to require dam releases to be increased to eliminate adverse impacts to downstream users.

6. *Concerns expressed on the potential impact of Lake Anna Dam flow releases of less than 40 cfs on downstream water intakes and ability to meet water quality limits of permitted discharges. Questioned how DEQ will determine when there are adverse impacts due to reduced flow releases and how DEQ will handle notices from downstream stakeholders.*

Since the requirement for a Lake Level Contingency Plan (LLCP) was enacted in 2000, minimum releases from the Lake Anna Dam have been required to decrease from 40 cfs to 20 cfs when Lake Anna water elevations decrease below 248.0 feet above msl. The VWP permit for the proposed Unit 3 incorporates the LLCP currently in the VPDES permit for the facility with a revision to the water elevation at which flows must be decreased. The draft VWP permit requires dam releases be reduced beginning at 248.1 feet msl instead of 248.0 feet msl, providing storage for a Flow Augmentation Release (FAR). The purpose of a FAR is to address impacts of reduced flows on downstream beneficial uses when dam releases of 20 cfs occur. Currently, the LLCP in the VPDES permit for the facility does not provide parameters for when such a release may be conducted nor provide storage for such a release. This has been addressed in the VWP permit. Additionally, the permit allows for an increase in dam releases for situations when adverse impacts are experienced downstream but occur outside of the guidelines for a FAR. Staff believes the measures in the draft VWP permit adequately address potential adverse impacts to downstream users from low flow releases.

During timeframes of reduced dam releases (20 cfs), it is the responsibility of downstream users to determine if low flows are affecting their respective withdrawal/discharge and to notify DEQ of any concerns. DEQ will assess any reported concerns to determine if reduced dam releases are resulting in any adverse impacts to existing downstream beneficial uses. In determining adverse impacts, DEQ will give the highest priority to protecting Hanover County's drinking water intake on the North Anna River. Staff does not anticipate the occurrence of 20 cfs flows to occur frequently. Since the creation of the LLCP, Lake Anna Dam releases have been reduced to 20 cfs twice. It is anticipated that the FAR releases will only be necessary in extreme climatic events.

Procedures similar to those proposed for the Lake Anna Dam are currently implemented in some form at both Smith Mountain Lake and Claytor Lake. Adjustment of low flow dam releases occurs at DEQ's direction following consultation with the permittee and downstream stakeholders. The permittee will convene a meeting with DEQ staff and stakeholders identified in Part I.F.3.a of the draft permit once set parameters are met following a reduction of dam releases from 40 cfs to 20 cfs or when notified by a downstream stakeholder of potential adverse impacts from reduced dam releases. After assessing available information, staff will decide if an increase in the low flow dam releases is appropriate. This procedure has been particularly effective when dealing with drought conditions (the most likely time an FAR would be needed). The process allows for more active balancing of impacts to beneficial uses based on current and projected climatic conditions, allowing uncertainties to be adaptively managed when it may be in the interest of the Commonwealth to prolong storage rather than abide a strict pre-established release schedule.

All DEQ permits across the Commonwealth must reflect current conditions and, with each permit cycle, agency guidance requires re-evaluation of permit conditions whenever there is a change in the facility or the stream that may alter the assumptions used previously. These protocols would be applied regardless of the decision on this proposed VWP permit action. Concerns voiced by the downstream users that pertain to existing and future permit limits of their VPDES permits are more appropriately addressed in the stakeholders' VPDES permits for those discharges.

7. *Requested the permit include conditions and define procedures to increase releases above 20 cfs to protect downstream users from adverse impacts potentially caused by Lake Anna Dam flow releases of 20 cfs. Recommended such a procedure include specific criteria representing adverse impact such as violating water quality criteria or dissolved oxygen criteria. Recommended specific revisions to Part I.F of the permit, such as a 3-day rolling average instead of a 7-day rolling average, to address these concerns.*

As described in No. 6, procedures similar to those in use for other major reservoirs in Virginia will be implemented at the Lake Anna Dam to determine if an increase in reduced dam releases is appropriate. Placement of procedures in a permit that specify actions for which DEQ is responsible is not appropriate as a permittee cannot be held liable for compliance with actions that are not theirs to implement.

Staff did not revise the rolling average timeframe in Part I.F.3.b. Since the installation of the gage at Doswell in 2004, the 7-day rolling average flow has been less than or equal to 42 cfs 10 percent of the time since that gage's installation in 2004 without known adverse impacts. More importantly, this 10 percent incidence is more than twice the incidence of the historical 20 cfs release percentage (less than 5 percent) and nearly twice that of the projected 20 cfs release incidence under the new permit (5.7 percent). This means that nearly half of the time that flow at Doswell is less than or equal to 42 cfs the releases at the Lake Anna Dam would be expected to be at the 40 cfs release rate. Therefore, we consider the 7 day period to be an extremely sensitive trigger for convening a meeting for the purposes of discussing the dam releases.

In response to citizen comments on Part I.F of the permit, staff revised Part I.F.3 and 4 of the permit to clarify the intent of the conditions. Additionally, staff revised Part I.F.4.b to include the intent of the request for dam releases to be increased when potable water supplies are or will be impacted due to reduced flow releases and included a definition of "adverse impact."

Staff believes the measures in the draft VWP permit adequately address potential adverse impacts to downstream users from low flow releases and protect existing downstream beneficial uses.

8. *Concerns that recreational flow releases proposed to provide downstream recreational canoeing will impact lake users. Some respondents requested that such releases be allowed only when lake elevations are greater than the proposed new normal pool elevation of 250.25 feet msl.*

Staff must consider the beneficial uses of both Lake Anna and reaches downstream of Lake Anna. Through workgroups associated with the IFIM study, the Virginia Department of Conservation and Recreation (DCR) provided a recommendation regarding flow releases with the intention of improving recreational opportunities on the North Anna River, specifically for paddling. DCR requested recreational releases of 177 cubic feet per second (cfs) be provided every Saturday during June and July when the lake level is greater than 250.0 feet msl. DCR has consistently recommended recreational releases for VWP permits for major reservoirs. Recreational releases are provided for in the VWP permits for Claytor Lake and Smith Mountain Lake. As a result of staff's analysis, staff proposed recreational flows occur in May and June rather than June and July. By moving the recreational releases to May and June, and triggering when lake elevation is greater than 250.0 feet msl, the mean annual difference in lake elevation as a result of the recreational releases is predicted to be less than 0.08 inches, and would not affect lake elevations during the drought of record (2002), as the recreational flows would not have been triggered. The revised timeframe was coordinated with DCR, which found the revised timeframe acceptable. Staff included their recommendation as a condition of the VWP permit (Part I.F.5).

9. *Concern that the recommended recreational flow release of 177 cfs may not provide sufficient flow in the desired recreational reaches of the North Anna River. Requested the volume be reviewed to determine if sufficient and permit condition included that requires the review and potential adjustment of the flow after a period of sufficient data collection, such as two years.*

Staff must consider and balance the beneficial uses of both Lake Anna and reaches downstream of Lake Anna. The proposed recreational release of 177 cfs was evaluated by staff and determined acceptable to provide recreational flows and while keeping the corresponding reduction in lake level to a minimum. The mean annual difference in lake elevation as a result of the recreational releases as proposed in the draft permit is predicted to be less than 0.08 inches. The proposed recreational release rate of 177 cfs is within the bound evaluated by staff as acceptable while minimizing the affect on lake level and staff does not support a change that results in the required minimum release being higher than daily average of 177 cfs.

Staff revised condition Part I.F.5 of the draft permit in response to comments to allow the release to be adaptively managed, as directed by DEQ, should an adjustment of timing and/or peak release rate, not to exceed a daily average of 177 cfs, be determined necessary. The draft permit allows for flows higher than 177 cfs if the dam is already releasing at a higher rate in accordance with dam operating procedures when a recreational flow is required. However, if dam releases are less than 177 cfs during a time when recreational releases are required, releases cannot be increased any higher than an average daily release of 177 cfs to meet the requirement.

10. *Comment that current minimum Lake Anna Dam releases of 20 and 40 cfs and Louisa County's request for a withdrawal for drinking water is unreasonable given the primary purpose of Lake Anna as a source for cooling water and pre-dam flows in the North Anna River. Recommend instead that dam releases replicate inflow to Lake Anna.*

The Lake Level Contingency Plan requires a defined amount of water be released from the Lake Anna Dam, based upon lake elevation, during periods of low flow to provide flow to downstream users while conserving lake levels for users of Lake Anna. The release of 40 cfs from the Lake Anna Dam has been in effect since the construction of the dam in 1971. The flow regime and frequencies of the North Anna River changed as a result of the dam by a decrease in median flows and elimination of extreme flows. The existence and operation of the dam has become the normal or baseline conditions of the North Anna River. Staff does not propose a change to the

previously accepted flow release rate of 40 cfs as existing beneficial uses downstream of the dam are reliant upon these accepted flows.

Upon receipt of an application from Louisa County for a water withdrawal, staff will review the request in light of the existing watershed, including any existing water withdrawals and downstream users. A VWP permit will only be issued if the permit evaluation concludes the amount authorized will not adversely affect existing beneficial uses.

Modeling and Instream Flow Incremental Methodology (IFIM) Study

11. *Questions regarding the Lake Anna Dam release scenarios (20, 40, 60 and 177 cfs) studied in the Instream Flow Incremental Methodology (IFIM) and the correlation of these flows to statements regarding maintaining lake levels. Questioned if scenarios reviewed included the consumptive use of the proposed Unit 3 as not explicitly stated.*

An IFIM study was conducted by the applicant upon the request of DEQ and the Department of Game and Inland Fisheries (DGIF) during review of the Unit 3 project under Virginia's Coastal Zone Management Act in accordance with Virginia's water regulations for the applicant's Early Site Permit application to the U.S. Nuclear Regulatory Commission. The IFIM studied the potential affect the consumptive withdrawal volume associated with the selected cooling system alternative for Unit 3 may have on aquatic habitat and recreation in the North Anna and Pamunkey Rivers downstream of the Lake Anna Dam. The focus of the study was the potential affect the proposed consumptive withdrawal may have on low flow releases of 20 cfs as this is the period which would be most affected by the consumptive withdrawal.

The IFIM study concluded that a 3 inch rise in lake elevation will decrease the occurrence of 20 cfs releases associated with the consumptive withdrawal for Unit 3 from 6.3 percent to 5.5 percent, resulting in these flows occurring one percent more frequently than the existing condition. The study also reviewed the potential affect of the three inch rise on lake elevation by considering the proposed consumptive withdrawal based upon cooling system operations, a lake level rise of three inches and dam operation procedures based upon lake elevations. Based on this analysis, the applicant concluded that water levels will be above existing conditions 75 percent of the time.

12. *Question how the IFIM study incorporated the WHTF into the analysis. Request the IFIM study be revisited to reflect the WHTF design water levels have not been maintained.*

The design water elevation of 251.5 feet msl for the WHTF is an artifact of the originally planned four unit station from the 1970's. This elevation was derived as the design water elevation at the station discharge using a calculation based on the estimated volume and flow rate of cooling water expected to pass through the four once-through units at full operation. The median operating water level of the WHTF over approximately the last 30 years is 250.8 feet msl. DEQ is requiring compensation for a change to shoreline wetlands using the median water level as this is the typical condition under which shoreline wetlands have formed over the last 30 years.

The IFIM study included the volume in both Lake Anna and the WHTF and assumed the same water level in both water bodies. This is a conservative approach as the water level in the WHTF must be maintained at a higher elevation than Lake Anna for water to discharge from the WHTF into Lake Anna. The water level in the WHTF fluctuates, and has historically done so, as part of Dominion's standard operating procedure. Staff understands the applicant only operates the WHTF in regards to water level to retain a differential with the elevation in Lake Anna to allow water from WHTF to discharge into Lake Anna, not to maintain a certain elevation. Staff has determined the volume of water in the WHTF was adequately addressed in the IFIM study.

Lake Anna and Waste Heat Treatment Facility (WHTF) Water Levels

13. Concerns of lower water elevations in Lake Anna despite the proposed three inch increase in the targeted normal pool elevation. Also, received concerns for a higher water elevation in Lake Anna.

The applicant proposes to mitigate the effects of the proposed consumptive water withdrawal by increasing the normal target pool elevation of Lake Anna to create more storage. The applicant reviewed several alternatives for increasing lake elevations during the IFIM study. The scenarios reviewed included a three inch increase, a six inch increase and a seven inch increase in lake elevation. The applicant also considered a seasonal lake level rise, but this alternative was dismissed as this alternative reduced certainty regarding improvement in dam releases of 20 cfs as additional storage would be eliminated in other seasons. Additionally, a seasonal approach would not likely reduce changes to shoreline wetland.

Any affects of the withdrawal on downstream flows would be eliminated through a lake level rise of seven inches. However, this alternative, as well as the six inch increase alternative, were dismissed due to concerns the applicant received from stakeholders on the potential affect the six or seven inch rise may have on shoreline and existing boat docks and ramp structures. Additionally, the applicant determined that the six inch and seven inch increase alternatives would result in over 13 acres of additional impacts to shoreline wetlands than those associated with a three inch increase in lake level. During the IFIM study, the applicant determined that a three inch rise in water levels decrease the occurrence of low flow releases associated with the consumptive withdrawal for Unit 3 from 6.3 percent to 5.5 percent over the 29 year modeling period, resulting in low flows occurring 1 percent more frequently than the existing condition.

Under existing conditions, the water elevation of Lake Anna is below 250.0 feet msl approximately 35 percent of the time. Staff analysis indicates that the proposed three inch rise would offset the effects of the major surface water withdrawal and recreational dam releases so that there will be no increase in occurrence of water elevations below 250.0 feet msl. Based upon staff analysis, it is estimated that the minimum lake elevation under the proposed permit would have been higher than the historical elevation in all years but the drought of record (2002) when the minimum elevation is estimated to be less than 0.2 inches lower than that observed in the historical record.

The applicant reviewed during this application process the potential affect the selected alternative may have on lake levels above the proposed target pool elevation of 250.25 feet msl during storm events. The analysis showed the predicted peaks in lake level exhibit a time shift between the existing and proposed conditions during storm events, with water levels being an average of two inches higher under the proposed scenario. The analysis was conservative as it was based upon a one day time length, whereas actual dam operations will cause gates to be adjusted more frequently than once daily. The applicant proposes to continue to operate the dam to target the normal pool elevation of 250.0 feet msl, thus increasing dam releases when lake elevations rise above 250.25 feet msl to return lake levels to the normal pool elevation.

The selected alternative of a three inch increase in water elevation was selected and agreed upon through the IFIM study as it will mitigate the effects of the consumptive withdrawal while also minimizing impacts to shoreline wetlands. The selected alternative also addresses concerns of lake stakeholders on potential flooding from an increase in the normal target pool elevation of Lake Anna by minimizing the amount of the increase. Staff concluded that the selected scenario of the proposed water withdrawal for Unit 3 with a three inch rise in lake level would have a minimal impact on Lake Anna and downstream aquatic habitat. While the proposed lake level increase will not fully negate the impact of the consumptive withdrawal, it will mitigate the impact on the lake and downstream of the dam.

In response to public comments requesting an additional monitoring station for lake level in the upper reaches of Lake Anna, staff added a permit condition (Part I.G.2.a.(6)) that requires the applicant to fund the installation of at least one lake level monitoring station up-lake.

14. Concerns that the three inch rise in water elevation will have a potential impact on shoreline wetlands.

The water elevation in Lake Anna has historically fluctuated, and thus, the wetland systems along the lake's shoreline are accustomed to this fluctuation. In the IFIM study, five coves were evaluated for wetlands and field surveys conducted. Based upon the species observed during those field surveys, the majority of the species have inundation frequency tolerances that range from seasonally saturated to irregularly or seasonally inundated.

Based upon the IFIM study, the proposed scenario of increasing the water elevation will mitigate the consumptive withdrawal. During the study, the applicant reviewed several alternatives for increasing lake elevations to create more storage. The applicant concluded the effects of the withdrawal would be eliminated through an increase of seven inches but would impact over 13 acres of shoreline wetlands. The applicant eliminated this alternative due to the wetland impacts and concerns from stakeholders of the potential affect such a rise may have on shoreline and existing boat docks and ramp structures. The selected alternative of a three inch increase in water elevation was agreed upon through the IFIM study as it mitigates the consumptive withdrawal while minimizing impacts to shoreline wetlands and addresses stakeholder concerns. The proposed lake level rise of three inches will result in the lake elevation being three inches higher than existing conditions 75 percent of the time.

Staff requested the applicant evaluate the shoreline wetlands that would be located within the three inch change in normal target pool elevation from 250.0 feet msl to 250.25 feet msl. A desktop analysis of the potential change to shoreline wetland was appropriate due to the size of the area under review (approximately 272 miles of shoreline) and the nature of the proposed activity. The purpose of the desktop analysis was to: 1) identify potential areas with a high likelihood of being wetland, and 2), wetland areas with potential to experience an increase in inundation. The analysis was not intended to provide a definitive location of impacts.

It was determined the wetlands within the area from 250.0 feet msl to 250.25 feet msl have the potential to undergo a change in vegetation type and/or hydrologic influence from the proposed three inch increase in surface waters. Based upon the analysis, an increase in water elevation could potentially affect an estimated 8.14 acres of wetlands. Staff does not anticipate a loss of wetlands; rather the potential change is a shift in wetland type, location and/or function. Due to the potential for a change in wetlands acres and/or function, the applicant is providing compensation for the estimated amount of wetlands that may be affected. Compensation for the change to shoreline wetlands is proposed to be provided at a ratio of 1:1 (8.14 wetland credits).

For the wetland areas outside of the ranged reviewed, staff does not anticipate any significant change in wetland acreage and/or function as the change in inundation in these areas would be less than the areas within the change in normal target pool elevation.

Issuance of a draft permit indicates staff's determination that there is reasonable assurance that the activity, as proposed to be authorized by the draft permit, will protect beneficial uses, will not violate applicable water quality standards, and will not cause or contribute to significant impairment of state waters or fish and wildlife resources, provided the applicant complies with all permit conditions.

15. *Request that a test period be implemented for a three inch rise to determine any possible adverse effects from the increase in lake elevation.*

The three inch rise in the water elevation of Lake Anna is to mitigate the effects of the consumptive withdrawal on downstream flow and lake levels. The draft permit requires the three inch rise be realized prior to initiating the water withdrawal. The three inch rise was accepted by DGIF and DEQ as a measure to mitigate the withdrawal without a test period. If after issuance of a VWP permit substantial, documented environmental concerns are realized from the permitted activity, the permit may be reopened to address the issue.

Lake Management and Lake Anna Watershed

16. *Request for a comprehensive Lake Anna watershed impact study that evaluates all proposed and future water permits. Concern that permits issued without knowledge of the inflow into Lake Anna.*

The VWP Permit Program reviews an application for a proposed water withdrawal in light of the existing watershed, including any existing water withdrawals and downstream users. This review assesses how the proposed activities that are within the purview of the VWP Permit Program could affect existing beneficial uses. A VWP permit for a water withdrawal is only issued after the study concludes the amount authorized will not adversely affect existing beneficial uses. The permit application review does not require the applicant nor DEQ to complete a study that includes potential future applications beyond their control. Should the applicant receive a permit for their withdrawal, all future requests for withdrawals will need to account for the applicant's withdrawal.

During the review of the proposed project under the CZM Program, DGIF and DEQ required that an IFIM study be conducted. The study included the existing condition of Lake Anna and reviewed all existing water withdrawals and discharges to the North Anna and Pamunkey Rivers within a distance of 70 miles downstream of the Lake Anna Dam. Additionally, during the application review process, staff modeled the withdrawal to evaluate the potential impact of the proposed activities on the watershed.

Based upon the results of the IFIM study, the proposed three inch rise will mitigate the effects of the major water withdrawal as it will reduce the frequency of low flow releases to 5.5 percent, approximately 1 percent more frequent than existing conditions. Regarding the potential affect on lake elevations, the study concluded under existing conditions, the water elevation of Lake Anna is below 250.0 feet msl approximately 35 percent of the time. Staff analysis indicates that the proposed three inch rise would offset the effects of the major surface water withdrawal and recreational dam releases so that there will be no increase in occurrence of water elevations below 250.0 feet msl. The evaluations concluded that selected scenario of the proposed water withdrawal for Unit 3 with a three inch rise in lake level will have a minimal impact on Lake Anna and downstream aquatic habitat.

There are no suitable DEQ or U.S.G.S. hydrologic stream flow gages on streams that flow into Lake Anna, thus the inflow to Lake Anna was determined using other statistically valid and acceptable methods. This situation is not atypical for surface water withdrawal applications as it would be cost prohibitive for either DEQ or USGS to have a gage at every location that one may be needed. The applicant's Lake Anna water budget model was developed by the Bechtel Corporation for the time period of October 1978 through October 2007. The Bechtel model calculated inflow using a reverse routing procedure that used data from dam releases and storage to determine inflow. This model was used in the preparation of their applications to the NRC for the ESP and COL, the IFIM study and the VWP permit application. During the course of the IFIM study, DEQ staff determined this method of calculating inflow was acceptable. As part of DEQ's modeling analysis, staff extrapolated data from a suitable surrogate watershed to determine inflow. This information was used by staff to verify the estimation tool used by the applicant, and showed that the water-balance model's approach provided a conservative estimate of inflows to the lake.

The draft permit requires the installation of two stream gaging stations prior to the initiation of the withdrawal (Part I.G.4). The purpose of this condition is to gather data on the inflows into Lake Anna for use in the validation and improvement of inflow estimation tools used in future evaluations of the Unit 3 withdrawal.

17. *Statement that Louisa County intends to submit an application for a water withdrawal from Lake Anna by the close of the public comment period for this application. Request their need be considered during the review of the applicant's application.*

DEQ received an application from Louisa County Water Authority on February 22, 2012, requesting a VWP permit to withdraw a maximum daily volume of 3.5 million gallons per day from Lake Anna for public drinking water. Staff will review their request in light of permitted withdrawals and pending applications.

18. *Comments that Lake Anna and WHTF is currently mismanaged and a lake management plan should be developed to better regulate water levels and provide for adequate conservation measures.*

As discussed under No. 2 under Part III, the applicant proposes measures to conserve water and to provide additional storage for dry periods, which includes operational procedures for the cooling towers to conserve water for Lake Anna and downstream beneficial uses during times of low flow. The current management of the Lake Anna Dam is done in accordance with Dominion's standard operating procedures.

Part I.F of the draft permit pertains to lake management and Lake Anna Dam releases. These conditions require the applicant operate the cooling system in two different modes, EC Mode or MWC Mode, based upon the water elevation of Lake Anna and a flow release schedule to conserve water for both lake users and downstream users. Additionally, the applicant is required to increase the normal target pool elevation of Lake Anna by three inches to provide additional storage volume to mitigate the effects of the major surface water withdrawal on lake level and downstream users.

Fluctuations in water levels have occurred historically, and will continue to under this draft permit, on both sides due to atmospheric conditions such as rainfall and runoff. Additionally, water levels in the WHTF are influenced based upon Dominion's standard operating procedures of the existing Units 1 and 2 and vary when one unit is temporarily shut down for maintenance or refueling. Lake level changes are expected to be proportionally similar to changes seen over the life of the project.

The draft permit requires an increase in the water level in the WHTF with the resulting water level dependent on the configuration of stop logs at dike 3 and the number of operating circulating water pumps at the existing Units 1 and 2. The additional three inches is not applied to the original design pool elevation. The draft permit requires that the applicant enact a permanent increase of three inch rise in the normal target pool elevation of Lake Anna and a resulting increase in the WHTF, which will occur through a change in the Spillway Gate Operating Procedure of the Lake Anna Dam. No other changes are proposed to the operation of the treatment facility nor are any required. The operations of the WHTF are not within the purview of the VWP permit application for Unit 3.

19. *Request that no water withdrawal be allowed if lake levels decrease below two feet in either Lake Anna or the WHTF, with the exception of the current uses of the existing Units 1 and 2.*

Applications for water withdrawals are reviewed in light of the existing watershed circumstances at the time of permitting, which include permitted withdrawals, pending applications for withdrawals and any known excluded withdrawals. Permit conditions are developed that limit the withdrawal to that which can be supported by the watershed. Staff has determined that the proposed application will not result in any adverse impacts to beneficial uses. Therefore, further restriction of the proposed withdrawal is not warranted.

Unit 3 Operations

20. *Dominion should not be allowed an 100 hour operational allowance to operate in EC Mode despite lake elevation as it will increase water usage during summer months when lake levels tend to be lower, creating safety and health concerns.*

The applicant requested an allowance of 100 hours to operate with the dry cooling tower fans off despite lake level to allow them to meet high electricity demands, which would otherwise require an expensive off-system purchase of electricity and use of the most expensive generating units to meet demand. High electricity demand typically occurs during peak demand situations in summer months. This allowance is limited in Part I.E.1.b to times when the temperature is high (greater than 90 degrees Fahrenheit), when use of the dry tower cooling fans is least efficient. The allowance will provide approximately 16 megawatts to the power grid that would otherwise be required to operate the cooling tower fans. To conserve water in times of drought, this allowance will only be allowed if lake levels are above 247.0 feet msl.

The estimated maximum evaporation difference between the two modes based upon the cooling system model was determined to be 11.1 cfs. However, the applicant anticipates the actual evaporative difference to be less as

they anticipate using this allowance only during daylight hours. The maximum evaporative loss for the annual allowance of 100 hours equates to a decrease of less than 0.05 inch in Lake Anna water elevation. Staff has determined that the proposed allowance will not significantly impact lake level for other uses.

Recreation

21. Concerns that lake recreational uses will be negatively impacted by the withdrawal due to lower lake levels.

The water elevations in Lake Anna have historically fluctuated and will continue to do so due to factors such as precipitation, temperature, evaporation, and the provision of sufficient flow to users downstream. The IFIM study concluded that in the proposed scenario of increasing the water elevation by three inches, the lake elevation would be three inches higher than existing conditions 75 percent of the time.

The IFIM study reviewed the proposed consumptive portion of the major water withdrawal using data for a 29 year period. The period of time includes all months of the year as well as drought, normal and wet years. The results of the IFIM study indicated that the selected scenario of the proposed water withdrawal for Unit 3 with a three inch rise in lake level would have a minimal impact on Lake Anna. Under existing conditions, the study indicated water elevations of Lake Anna below 250.0 feet msl occur approximately 35 percent of the time. Staff analysis indicates that the proposed three inch rise would offset the effects of the major surface water withdrawal and recreational flows so that there will be no increase in occurrence of water elevations below 250.0 feet msl.

Staff determined that the proposed major surface water withdrawal will have minimal effect on recreational beneficial uses of the lake.

22. Concern that the operation of Unit 3 will prevent recreation because of public health concerns due to increases in water temperature.

During the VWP applications processes, staff evaluates how the volume of water proposed to be withdrawn for operations will affect Lake Anna and the downstream watershed and how the proposal to permanently increase the normal target pool elevation by three inches to mitigate the effects of the operational water withdrawal will affect surface waters. The VWP Permit Program does not evaluate the discharge(s) of effluent proposed with Unit 3. Water quality of existing and proposed discharges of effluent is regulated by the VPDES Program. The discharge aspects of the proposed Unit 3 will be addressed via the facility's VPDES permit.

23. Request that the uses of recreation and power generation be fairly balanced.

The proposed activities are reviewed in light of the existing beneficial uses of Lake Anna and downstream of the Lake Anna Dam. Based upon staff's review of the permit application, the proposed project is the least environmentally damaging and practicable alternative and all impacts are adequately mitigated through the proposed compensation. Staff has determined there is reasonable assurance that the activity, as proposed to be authorized by the draft permit, will protect existing beneficial uses, will not violate applicable water quality standards, and will not cause or contribute to significant impairment of state waters or fish and wildlife resources, provided the permittee complies with all permit conditions.

Water Quality

24. Question if water quality standards and permit conditions Part I.C.6 that requires reporting of any fish kills or spills of fuels or oils and Part II.Q that pertains to activities that may not occur in a surface water without a permit apply to the WHTF. Question if "state waters" and "surface waters" include the WHTF.

The draft permit is for a surface water withdrawal from Lake Anna and wetland impacts resulting from the lake level rise that will occur in both Lake Anna and the WHTF. The draft VWP permit conditions apply to those surface waters in which the authorized activities are to occur. Part I.C.6 of the permit states "Any fish kills or

spills of fuels or oils associated with the activities authorized by this permit shall be reported....” This condition requires the applicant to report such incidences if the authorized activities result in those incidences.

With regards to Part II.Q, this condition states that certain activities, such as waste discharges, are not to occur if a VWP permit has not been obtained. The intention of the latter condition is to remind the permittee that they may only conduct those activities for which they received a permit. VWP Permit Program regulation, 9 VAC 25-210-60.A.3, states that a VWP permit is not required for a discharge permitted by a VPDES permit. The discharge of pollutants, such as thermal heat or wastewater, is regulated by the VPDES program. The North Anna Power Station has a VPDES permit for the discharge of the existing Units 1 and 2.

“Surface waters” is the legal term used in Virginia’s VPDES and VWP regulations that describe the waters regulated by the SWCB under those regulations. The VPDES and VWP regulations define surface waters differently. Under the VPDES regulation, the definition of surface waters excludes water bodies that are used as waste treatment systems. The SWCB and DEQ have interpreted, and the Virginia Supreme Court has upheld, that the WHTF is a waste treatment system and not a surface water. Under the VWP regulation, the definition of surface waters does not exclude water bodies that are used as waste treatment systems; such water bodies are regulated under VWP. Because of different regulatory language, the SWCB can require a dredge and fill or water withdrawal permit in the WHTF under the VWP Permit Program but cannot impose permit conditions on the discharge of thermal effluent into the WHTF under the VPDES Program.

Monitoring Requirements

25. *Request for improvements to current monitoring methods of lake elevation and water temperature in Lake Anna and WHTF and for the data to be provided online. Suggested improvements include the addition of more sensors to be located up-lake and in the WHTF to better manage lake level. Requested the permit include the requirement for at least one monitoring site up-lake.*

The draft permit requires that the applicant submit a Lake Level Monitoring Plan for monitoring and recording the water elevation of Lake Anna to comply with permit conditions triggered by the water elevation of Lake Anna. The plan shall include a method that the selects technology to measure lake level using automated measurements, minimizes the effects of wave action, and electronically transmits data to a data management system on at least an hourly frequency. In response to public comments, staff revised the draft permit to require the applicant fund the installation of at least one lake level sensor located in the upper lake area of Lake Anna (Part I.G.2.a.(6)).

A temperature measurement is not included as this measurement does not provide data applicable to the activities regulated by the VWP Permit Program. The discharge of thermal heat is regulated by the VPDES Program. The discharge aspects of the proposed Unit 3 will be addressed via the facility’s VPDES permit.

Water level measurements in the WHTF also were not included as requirement of the permit as operations of the WHTF are not within the purview of the VWP permit application for Unit 3. Other than an increase in water level, no other changes are proposed to the operation of the treatment facility nor are any required.

26. *Request that the applicant provide online the status of which cooling system modes of operation, EC Mode or MWC Mode, the new unit is in.*

Part I.H.5 of the draft permit requires the applicant make quarterly water withdrawal monitoring reports available to the public by posting the reports on a publicly accessible website. In these reports, the applicant is required to report the cooling system mode of operation (EC Mode or MWC Mode) for each day that a water withdrawal occurred. Staff has considered the comments and determined that this requirement meets the intent of the comment.

VWP Permit Related

27. *Comment that Part I.D.2 of the draft permit should include a maximum instantaneous withdrawal limit of 36.7 mgd.*

The maximum instantaneous withdrawal rate of 36.7 mgd is based upon the simultaneous operation of the Circulating Water System, Ultimate Heat Sink Cooling Tower Make-up Water System and Station Water System at design flow and the full rate of one Fire Protection Water Supply System (FSS) pump. Staff determined the inclusion of this value in the draft permit was not necessary as the simultaneous operation of all of these systems at design flow will not occur during actual operations due to the purpose served by each system. For instance, withdrawals for other operations will decrease or cease during a fire event necessitating use of a FSS pump.

Part I.D.5 of the draft permit provides a maximum instantaneous limit on the maximum rate of evaporation for each cooling system mode of operation (EC Mode versus MWC Mode) based upon modeled evaporation rates.

28. *Question the purpose of condition Part I.D.5 that limits the maximum rates of evaporation from the hybrid cooling tower and concern it conflicts with consumptive maximum yearly withdrawal limits.*

Draft permit condition Part I.D.5 does not conflict with the maximum yearly withdrawal limitations, but further bounds the allowed consumptive volume. The purpose of Part I.D.5 is to ensure maximum evaporation rates for the cooling towers do not exceed modeled evaporation estimates for each mode of operation by limiting the maximum rates of evaporation for each mode of operation. The maximum rates of evaporation of 16,300 gallons per minute (gpm) for EC Mode and 11,200 gpm for MWC Mode are the maximum instantaneous rates that can be achieved for each respective cooling system mode under normal operations at 0.4 percent exceedance ambient conditions. These values correlate to the maximum daily consumptive volumes in the application. A straight conversion of these daily values into annual values is not appropriate as such a conversion does not take into consideration variations in consumptive use that occur based upon cooling system mode of operation (EC Mode versus MWC Mode) and ambient conditions over the 29 year modeling period. The annual limits in the draft permit (Part I.D.3b. and 4b.) account for these variations in water use.

The permit requires (Part I.H.1) that the applicant submits a certificate of conformance from a testing agency certified by the Cooling Tower Institute (CTI) to demonstrate compliance with Part I.D.5 to ensure the cooling tower will operate according to the modeled evaporation estimates for each mode of operation.

29. *Request that “periods of high electric demand” be better defined in the permit (Part I.E.1.b) which pertains to when the applicant may use the allotted 100 hours to operate with dry cooling tower fans turned off when lake elevations are below 250.0 feet msl.*

The applicant requested an annual allowance of 100 hours to operate in MWC Mode with the dry cooling tower fans turned off to allow them to meet high electricity demands, which would otherwise require an expensive off-system purchase of electricity and use of the most expensive generating units to meet demand. The draft permit limits when this can occur to when temperatures are greater than 90 degrees Fahrenheit and lake levels are above 247.0 feet msl. Based upon staff’s analysis of the requested allowance, this allowance would potentially lower the water surface by less than 0.05 inches. Staff has determined defining what constitutes a period of high electric demand in the permit is not necessary as it will not result in additional protection of the water resource.

30. *Request from the applicant that the permit clarify that the conditions in Part I.E (Modes of Operation) become effective on the date that the Unit 3 begins commercial operation. The applicant has requested this to allow for the necessary testing period of the cooling system in both modes of operation, EC Mode and MWC Mode, to proceed without delays that may result if lake levels drop below 250.0 feet msl.*

Staff has determined that the applicant’s request is acceptable and will not result in significant environmental harm as the proposed cooling tower testing period will be a onetime event, will be of short duration and the water

withdrawal and consumption will be limited to the authorized volumes. The draft permit has been clarified to reflect the comment.

31. *Request the withdrawal be reviewed after one year to determine impacts on the watershed and adjust the limits as necessary, and then annually thereafter to evaluate the withdrawal data versus the modeling analysis. This should apply to all withdrawals from Lake Anna.*

Since the Unit 3 cooling system is yet to be built, the expected water use under varying climatic conditions was predicted by employing a numerical model to estimate losses of water due to evaporation and drift. Therefore, to insure that the actual operational impacts of Unit 3 do not exceed those that were predicted, the permit requires the applicant evaluate and compare actual consumptive withdrawal volumes to those volumes predicted by the cooling tower component of the Lake Anna Water Budget Model. This evaluation must be submitted every three years of Unit 3 operation. Staff determined that conducting this evaluation every three years provides sufficient data for comparison.

Staff cannot include in this VWP permit a condition that applies to activities not proposed for coverage under this permit. Staff will review any future water withdrawals from Lake Anna in light of the watershed conditions at that time and determine if a periodic evaluation of a withdrawal under review is warranted as a condition of the permit for that particular withdrawal.

32. *Concern regarding the permit term for a VWP permit.*

In accordance with Section 62.1-44.15.5(a) of the Code of Virginia, VWP permits are allowed a maximum permit term of 15 years. This section of the law also states that the permit term shall be based upon the duration of the project, the length of any monitoring, project operations or any permit conditions. Therefore, applicants typically request a permit term length that allows sufficient time to complete the proposed permitted activities. For the major surface water withdrawal for operational activities, the applicant requested a 15 year permit term as the activity will continue for longer than 15 years. The proposed permit term is reasonable and complies with the law.

If after issuance of a VWP permit substantial, documented environmental consequences are realized from the permitted activity, the permit may be reopened to address the issue. VWP regulation 9 VAC 25-210-110.G states that a permit may be reopened to modify conditions to meet new regulatory standards or if special studies conducted by the SWCB or permittee indicate or circumstances on which the permit was issued have since materially or substantially changed.

33. *Concerns that water permits for the proposed Unit 3 project and for the Lake Anna watershed are being processed in a piece-meal fashion.*

Submittal of a VWP permit application is entirely at the discretion of the applicant and DEQ must address each application as it is received. Upon receipt of an application for a VWP permit or for a VPDES permit, staff will review and process the application in accordance with the applicable program's laws, regulations and guidance. The VWP process is inherently a first come first served program. It is not prospective or speculative of future needs.

Staff reviews an application in light of the existing circumstances of the watershed, which includes existing uses and withdrawals. Staff determines if the watershed can support the volume of proposed withdrawal in light of existing water uses in the watershed and whether the volume will negatively impact existing beneficial uses. An applicant is not required to complete a study that includes potential future applications beyond their control. Should the applicant receive a permit for their withdrawal, all future requests for withdrawals will need to account for the applicant's withdrawal.

During the review of the proposed project under the CZM Program, DGIF and DEQ required that an IFIM study be conducted. The study included the existing condition of Lake Anna and reviewed all existing water withdrawals and discharges to the North Anna and Pamunkey Rivers within a distance of 70 miles downstream of the Lake Anna Dam. During the application process, staff conducted a modeling analysis that reevaluated the potential affect of the proposed withdrawal on Lake Anna and downstream of the Lake Anna Dam.

A summary of the proposed activities associated the proposed Unit 3 that are to be regulated by either the VWP Permit Program or the Virginia Pollution Discharge Elimination System (VPDES) Program has been provided.

34. *Question why the Counties surrounding Lake Anna are not indicated on the list of stakeholders in Part I.F.3.a that are required to be notified when releases from the Lake Anna Dam are reduced to 20 cfs.*

Since the inclusion of the LLCP in the applicant's existing VPDES permit for the facility, the applicant has been required to notify downstream stakeholders if Lake Anna Dam releases are to be reduced from 40 cfs to 20 cfs. This notification is required as these stakeholders are potentially adversely affected by a decrease in flows that are required to preserve lake elevation. During the application process for the proposed Unit 3, one group representing citizens with lake interests, Lake Anna Civic Association, requested to be added to the notifications. Staff has not received a similar request from Counties surrounding Lake Anna that they desired such notification. It is also unclear how these entities would be adversely impacted.

35. *Concern regarding the transfer of the permit should the station be sold.*

It is the responsibility of the permit-holder to conduct authorized activities in accordance with the permit. Any transfer of responsibility of a VWP permit must be conducted in accordance with 9 VAC 25-210-180.E of VWP Permit Regulation. This is a process available to any VWP permit holder and is not unique to Dominion. Upon transfer of the permit, the new permit-holder will assume responsibility, coverage and liability of the VWP permit.

36. *Comment that the limits for the water withdrawal should be ratios of the inflow, not flat numbers.*

Limits based upon ratios of the inflow into Lake Anna are not practicable as this approach does not take into account the storage of the lake nor the applicant's stated water demand to meet the purpose of the project. For an intake on a lake, inflows into the system are considered in the evaluation of the water budget for the watershed, which is a component in determining appropriate withdrawal limitations.

The purpose of the project is to provide water to support the operations of a new base load nuclear unit. The application was reviewed in light of the existing watershed circumstances at the time of permitting, which included permitted withdrawals, pending applications for withdrawals and any known excluded withdrawals. Based upon this information, the withdrawal limits were developed in light what can be supported by the watershed and the applicant's request based upon anticipated performance of the cooling system over a 29 year period. The consumptive withdrawal will be mitigated through the increase in the targeted normal pool elevation by three inches.

Staff has determined that the proposed activities will not result in any adverse impacts to beneficial uses and the limitations on the proposed volume of water will protect existing beneficial uses.

37. *Questioned how DEQ could make decisions when Dominion has not committed to building Unit 3 and the U.S. Nuclear Regulatory Commission is still reviewing aspects of the project.*

VWP Permit Program regulations do not require an applicant secure financial support, obtain other approvals or make final decisions about proceeding with a project before obtaining a VWP permit. It is at the applicant's own risk to proceed with a project without obtaining other approvals or securing financial backing for their respective project.

Comments Received in Support of the Proposed Project

The comments summarized below are those in support of the Part III (draft VWP Permit No. 10-2001) within the purview of the VWP Permit Program. Staff did not provide a response to comments of support for the project.

1. Comments received expressing support for the three inch rise.
2. Comments that impacts to the lake and downstream areas have been minimized and these areas will be protected through measures in the permit.
3. Comments that the draft permit limits the water withdrawal and consumption to amounts consistent with the anticipated performance of the cooling system. The hybrid cooling system is a good way to conserve water.
4. Comments that the applicant will report their activities regularly and conduct periodic evaluations of the cooling system.
5. Comments received expressing support for the Unit 3 project.
6. Comments in support of the recreational flow release condition (Part I.F.5).

UNIT(S) REGULATE D	PROGRA M	ACTIVITIES REGULATE D	DESCRIPTION OF ACTIVITIES	PERMIT NO.	PERMIT ACTION REQUIRED	PERMIT TERM	EXP. DATE
Unit 3 (proposed)	VWP	Impact to surface waters	Impacts to surface waters associated with: <ul style="list-style-type: none"> Construction related activities to support Unit 3 Large Component Transport Route 	VWP Permit No. 10-1256 (Part I)	New Permit	15 years	4-14-26
		Withdrawal from surface water	Minor water withdrawal for construction related activities: <ul style="list-style-type: none"> Dust and moisture control Cleaning of rock surfaces prior to inspection Irrigation to establish vegetative erosion and sediment control measures Construction equipment cleaning Fire protection 	VWP Permit No. 10-1496 (Part II)	New Permit	15 years	4-14-26
		Withdrawal from surface water / Lake level rise	<ul style="list-style-type: none"> Major water withdrawal for operation of Unit 3 Change to shoreline wetlands associated with a proposed 3 inch increase in water level 	draft VWP Permit No. 10-2001 (Part III)	New Permit	15 years (proposed)	TBD
	VPDES	Discharge to surface waters	Anticipate the following activities: <ul style="list-style-type: none"> Industrial Process Discharges Domestic Wastewater Discharges Industrial Storm Water Discharges 	VA0052451 (application not received)	Modification / Reissuance	5 years	TBD
			Work Force Construction Wastewater <ul style="list-style-type: none"> Discharge from a proposed wastewater treatment plant utilized during construction only 	N/A (application not received)	New Permit	5 years	TBD
			Proposed Wastewater Treatment Plant <ul style="list-style-type: none"> General Watershed Permit For Total Nitrogen And Total Phosphorus Discharges And Nutrient Trading In The Chesapeake Bay Watershed Nitrogen and Phosphorus discharges from new or expanding wastewater treatment plants 	N/A (application not received)	New Permit	5 years	TBD

Units 1 and 2 (existing)	VWP	Withdrawal from surface water	Water withdrawal for operation of existing Units 1 and 2	N/A	Excluded by 9VAC25-210- 60.B.1	N/A	N/A
	VPDES	Discharge to surface waters	<ul style="list-style-type: none"> ▪ Industrial Process Discharges ▪ Domestic Wastewater Discharges ▪ Industrial Storm Water Discharges 	VA0052451	Existing Permit	5 years	10-24-12

SUMMARY OF NORTH ANNA POWER STATION ACTIVITIES REGULATED BY VWP AND VPDES